					DEPARTMENT C	TE OF UTAH IF NATURAL RESO OIL, GAS AND M			AMEND	FOR ED REPOR		
		A	PPLICATIO	N FOR F	PERMIT TO DRILL			1. WELL NAME and NUMBER 16-12D-36 BTR				
2. TYPE OF WORK  DRILL NEW WELL REENTER P&A WELL DEEPEN WELL DEEPEN WELL								3. FIELD OR WILDCAT ALTAMONT				
4. TYPE OF WELL Oil Well Coalbed Methane Well: NO							5. UNIT or COMMUN	NITIZATI	ON AGRE	EMENT	NAME	
6. NAME OF OPERATOR BILL BARRETT CORP								7. OPERATOR PHON	<b>IE</b> 303 312-	-8164		
8. ADDR	ESS OF OPE		099 18th Stree	et Ste 230	0, Denver, CO, 80202			9. OPERATOR E-MA	IL ers@billbar	rettcorp.c	om	
	ERAL LEASE AL, INDIAN,				11. MINERAL OWNER FEDERAL INDIA	- CT-1	) FEE	12. SURFACE OWNE	IAN	STATE	) F	EE 📵
13. NAM	IE OF SURFA	CE OWNER (if b			borah Ivie			14. SURFACE OWNE	R PHONE 801-968		L2 = 'fe	e')
15. ADD	RESS OF SUI	RFACE OWNER (		<b>fee')</b> 556 W 480	D5 S, ,			16. SURFACE OWNE	R E-MAI	L (if box :	12 = 'fe	e')
	IAN ALLOTTI L2 = 'INDIAN	EE OR TRIBE NA	ME		18. INTEND TO COMM MULTIPLE FORMATIO YES (Submit Cor			19. SLANT  VERTICAL DIR	ECTIONAL	. 📵 н	ORIZON	TAL 🔵
20. LO	CATION OF W	/ELL		FOC	TAGES	QTR-QTR	SECTION	TOWNSHIP	RAI	NGE	MEF	RIDIAN
LOCAT	ION AT SURF	ACE		825 FSI	_ 260 FEL	SESE	12	3.0 S	6.0	W		U
Top of	Uppermost P	roducing Zone		793 FSI	809 FEL	SESE	12	3.0 S	6.0	W		U
At Tota	l Depth			810 FSI	810 FEL	SESE	12	3.0 S	6.0	W		U
21. COU	NTY	DUCHESNE			22. DISTANCE TO NEA	REST LEASE LINE 810	(Feet)	23. NUMBER OF ACI	<b>RES IN D</b> I 640		UNIT	
					25. DISTANCE TO NEA (Applied For Drilling o		ME POOL	26. PROPOSED DEP	<b>TH</b> 11155	TVD: 1111	.2	
27. ELEVATION - GROUND LEVEL 28. BOND NU					28. BOND NUMBER			29. SOURCE OF DRI	III TNG W	ΔTFR /		
5947						DM0074725		WATER RIGHTS API	PROVAL N	NUMBER 1	F APPL	ICABLE
	VALION ON					PM8874725	rmation			NUMBER 1	IF APPL	ICABLE
String			Length	Weigh	Hole, Casing, a	nd Cement Info	rmation		PROVAL N	NUMBER 1		ICABLE Weight
String Cond	Hole Size	Casing Size	0 - 80	65.0	Hole, Casing, a t Grade & Thread Unknown	Max Mud Wt.		Cement Unknown	43-18	Sacks	Yield 0.0	Weight 0.0
	Hole Size	5947  Casing Size			Hole, Casing, a	nd Cement Info	Halliburto	Cement Unknown on Light , Type Unknown	PROVAL N 43-18	Sacks 0 620	<b>Yield</b> 0.0 3.16	<b>Weight</b> 0.0 11.0
Cond	Hole Size	Casing Size	0 - 80	65.0	Hole, Casing, a t Grade & Thread Unknown	Max Mud Wt.	Halliburto	Cement Unknown	PROVAL N 43-18	Sacks 0 620 210	Yield 0.0	Weight 0.0
Cond	Hole Size 26 12.25	5947  Casing Size 16 9.625	0 - 80 0 - 4000	65.0 36.0	Hole, Casing, a t Grade & Thread Unknown J-55 ST&C	Max Mud Wt.  8.8  8.8	Halliburto	Cement Unknown on Light , Type Unknown , Type Urknown	PROVAL N 43-18	Sacks 0 620	<b>Yield</b> 0.0 3.16 1.36	0.0 11.0 14.8
Cond	Hole Size 26 12.25	5947  Casing Size 16 9.625	0 - 80 0 - 4000	65.0 36.0	Hole, Casing, a t Grade & Thread Unknown J-55 ST&C P-110 LT&C	Max Mud Wt.  8.8  8.8	Halliburto	Cement Unknown on Light , Type Unknown Unknown	PROVAL N 43-18	Sacks 0 620 210 690	<b>Yield</b> 0.0 3.16 1.36 2.31	0.0 11.0 14.8 11.0
Cond	26 12.25 8.75	5947  Casing Size 16 9.625 5.5	0 - 80 0 - 4000 0 - 11155	65.0 36.0 17.0	Hole, Casing, a t Grade & Thread Unknown J-55 ST&C P-110 LT&C	Max Mud Wt.  8.8  8.8  9.7	Halliburton	Cement Unknown On Light , Type Unkn Premium , Type Ur Unknown Unknown	nown	Sacks 0 620 210 690 930	Yield 0.0 3.16 1.36 2.31 1.42	0.0 11.0 14.8 11.0
Cond Surf Prod	Hole Size 26 12.25 8.75	5947  Casing Size 16 9.625 5.5	0 - 80 0 - 4000 0 - 11155	65.0 36.0 17.0	Hole, Casing, a t Grade & Thread Unknown J-55 ST&C P-110 LT&C	Max Mud Wt.  8.8  8.8  9.7  CACHMENTS	Halliburton	Cement Unknown on Light , Type Unk Premium , Type Ur Unknown Unknown	nown	Sacks 0 620 210 690 930	Yield 0.0 3.16 1.36 2.31 1.42	0.0 11.0 14.8 11.0
Cond Surf Prod	Hole Size 26 12.25 8.75 VERIFY	5947  Casing Size 16 9.625 5.5	0 - 80 0 - 4000 0 - 11155 /ING ARE A	65.0 36.0 17.0	Hole, Casing, a t Grade & Thread Unknown J-55 ST&C P-110 LT&C  ATT	Max Mud Wt.  8.8  8.8  9.7  ACHMENTS  E WITH THE UT	Halliburton Halliburton	Cement Unknown on Light , Type Unk Premium , Type Ur Unknown Unknown	nown hknown	Sacks 0 620 210 690 930	Yield 0.0 3.16 1.36 2.31 1.42	0.0 11.0 14.8 11.0
Cond Surf Prod	Hole Size 26 12.25 8.75 VERIFY VELL PLAT OF	Casing Size 16 9.625 5.5 THE FOLLOW R MAP PREPARE	0 - 80 0 - 4000 0 - 11155 VING ARE A	65.0 36.0 17.0 TTACHE	Hole, Casing, a t Grade & Thread	Max Mud Wt.  8.8  8.8  9.7  CACHMENTS  E WITH THE UT  COMP	Halliburton Halliburton	Cement Unknown On Light , Type Unknown Unknown Unknown Unknown Unknown CAS CONSERVATION CONSERVA	nown hknown	Sacks 0 620 210 690 930	Yield 0.0 3.16 1.36 2.31 1.42	0.0 11.0 14.8 11.0
Cond Surf Prod	Hole Size 26 12.25 8.75 VERIFY VELL PLAT OF	Casing Size 16 9.625 5.5 THE FOLLOW R MAP PREPARE STATUS OF SU SURVEY PLAN	0 - 80 0 - 4000 0 - 11155 VING ARE A	65.0 36.0 17.0	Hole, Casing, a t Grade & Thread	Max Mud Wt.  8.8  8.8  9.7  CACHMENTS  E WITH THE UT  FORM	Halliburton  Halliburton  AH OIL AND O  PLETE DRILLING  5. IF OPERATO	Cement Unknown On Light , Type Unknown Unknown Unknown Unknown Unknown  GAS CONSERVATION PLAN R IS OTHER THAN THE	nown hknown	Sacks 0 620 210 690 930	Yield 0.0 3.16 1.36 2.31 1.42	0.0 11.0 14.8 11.0
Cond Surf Prod	Hole Size 26 12.25 8.75 VERIFY VELL PLAT OF FFIDAVIT OF IRECTIONAL D) Venessa Langr	Casing Size 16 9.625 5.5 THE FOLLOW R MAP PREPARE STATUS OF SU SURVEY PLAN	0 - 80 0 - 4000 0 - 11155 VING ARE A	65.0 36.0 17.0 TTACHE SED SURV	Hole, Casing, a t Grade & Thread Unknown J-55 ST&C P-110 LT&C  ATT ED IN ACCORDANC VEYOR OR ENGINEER MENT (IF FEE SURFACE) OR HORIZONTALLY	Max Mud Wt.  8.8  8.8  9.7  CACHMENTS  E WITH THE UT  FORM	Halliburton  Halliburton  AH OIL AND O  PLETE DRILLING  5. IF OPERATO  GRAPHICAL MAI  PHONE 303	Cement Unknown On Light , Type Unknown Unknown Unknown Unknown Unknown  GAS CONSERVATION PLAN R IS OTHER THAN THE	nown hknown  ON GEN	Sacks 0 620 210 690 930	Yield 0.0 3.16 1.36 2.31 1.42	0.0 11.0 14.8 11.0
Cond Surf Prod  Prod  Drillei NAME SIGNA	Hole Size 26 12.25 8.75 VERIFY VELL PLAT OF FFIDAVIT OF IRECTIONAL D) Venessa Langr	5947  Casing Size 16 9.625 5.5  THE FOLLOW R MAP PREPARE STATUS OF SU SURVEY PLAN	0 - 80 0 - 4000 0 - 11155 VING ARE A	65.0 36.0 17.0 TTACHE SED SURV	Hole, Casing, a  Grade & Thread  Unknown  J-55 ST&C  P-110 LT&C  ATT  D IN ACCORDANC  EVEYOR OR ENGINEER  MENT (IF FEE SURFAGE  OR HORIZONTALLY  E Senior Permit Analyst  09/19/2011	Max Mud Wt.  8.8  8.8  9.7  CACHMENTS  E WITH THE UT  FORM	Halliburton  Halliburton  AH OIL AND O  PLETE DRILLING  5. IF OPERATO  GRAPHICAL MAI  PHONE 303  EMAIL vlan	Cement Unknown On Light , Type Unknown Unknown Unknown Unknown Unknown  GAS CONSERVATION FINANT OF THE	nown hknown  ON GEN	Sacks 0 620 210 690 930	Yield 0.0 3.16 1.36 2.31 1.42	0.0 11.0 14.8 11.0

### **DRILLING PLAN**

#### **BILL BARRETT CORPORATION**

### 16-12D-36 BTR Well Pad

SE SE, 825' FSL and 260' FEL, Section 12, T3S-R6W, USB&M (surface hole) SE SE, 810' FSL and 810' FEL, Section 12, T3S-R6W, USB&M (bottom hole) Duchesne County, Utah

# 1 - 2. <u>Estimated Tops of Geological Markers and Formations Expected to Contain Water, Oil and Gas and Other Minerals</u>

<b>Formation</b>	Depth – MD	Depth – TVD
Lower Green River*	6,718'	6,687'
Douglas Creek	7,549'	7,507
Black Shale	8,200'	8,157'
Castle Peak	8,335'	8,292'
Uteland Butte	8,665'	8,622'
Wasatch*	9,110'	9,067'
TD	11,155'	11,112'

<sup>\*</sup>PROSPECTIVE PAY

The Wasatch and the Lower Green River are primary objectives for oil/gas.

Base of Useable Water = 3,400'

### 3. BOP and Pressure Containment Data

Depth Intervals	BOP Equipment
0 - 4,000	No pressure control required
4,000' – TD	11" 5000# Ram Type BOP
	11" 5000# Annular BOP
- Drilling spool to a	accommodate choke and kill lines;
- Ancillary equipme	ent and choke manifold rated at 5,000 psi. All BOP and BOPE tests will be in
accordance with the	he requirements of onshore Order No. 2;
- The BLM and the	State of Utah Division of Oil, Gas and Mining will be notified 24 hours in
advance of all BC	OP pressure tests.
- BOP hand wheels	may be underneath the sub-structure of the rig if the drilling rig used is set up
To operate most e	fficiently in this manner.

### 4. <u>Casing Program</u>

<u>Hole</u> <u>Size</u>	SETTING DEPTH (FROM) (TO)		Casing Size	<u>Casing</u> <u>Weight</u>	<u>Casing</u> <u>Grade</u>	Thread	Condition
26"	Surface	80'	16"	65#			
12 1/4"	Surface	4,000'	9 5/8"	36#	J or K 55	BT&C	New
8 3/4"	Surface	TD	5 1/2"	17#	P-110	LT&C	New
NOTE:	In addition	. 8 3/4" hole	size may cha	ange to 7 7/8	" at the noin	t the bit is cl	nanged out.

Bill Barrett Corporation Drilling Program #16-12D-36 BTR Duchesne County, Utah

### 5. <u>Cementing Program</u>

Casing	Cementing
16" Conductor Casing	Grout
9 5/8" Surface Casing	Lead with approximately 620 sx Halliburton Light Premium with additives mixed at 11.0 ppg (yield = 3.16 ft <sup>3</sup> /sx) circulated to surface with 75% excess. Top of lead estimated at surface.
	Tail with approximately 210 sx Halliburton Premium cement with additives mixed at 14.8 ppg (yield = 1.36 ft <sup>3</sup> /sx), calculated hole volume with 75% excess. Top of tail estimated at 3,500'.
5 ½" Production Casing	Lead with approximately 690 sx Tuned Light cement with additives, mixed at 11.0 ppg (yield = 2.31 ft <sup>3</sup> /sx,). Top of lead estimated at 3,500°.
	Tail with approximately 930 sx Halliburton Econocem cement with additives mixed at 13.5 ppg (yield = $1.42$ ft <sup>3</sup> /sx). Top of tail estimated at $7,700$ °.

### 6. <u>Mud Program</u>

Interval	Weight	<u>Viscosity</u>	Fluid Loss (API filtrate)	<u>Remarks</u>
0' - 80'	8.3 – 8.8	26 – 36	NC	Freshwater Spud Mud Fluid System
80' - 4,000'	8.3 – 8.8	26 – 36	NC	Freshwater Spud Mud Fluid System
4,000' – TD	8.6 – 9.7	42-52	20 cc or less	DAP Polymer Fluid System

Note: Sufficient mud materials to maintain mud properties, control lost circulation and to contain "kicks" will be available at wellsite. BBC may require minor amounts of diesel to be added to its fluid system in order to reduce torque and drag.

### 7. <u>Testing, Logging and Core Programs</u>

Cores	None anticipated
Testing	None anticipated; drill stem tests may be run on shows of interest;
Sampling	30' to 50' samples; surface casing to TD. Preserve samples all show intervals;
Surveys	MWD as needed to land wellbore;
Logging	DIL-GR-SP, FDC-CNL-GR-CALIPER-Pe-Microlog, Sonic-GR (all TD to surface).
	FMI & Sonic Scanner to be run at geologist's discretion.

Bill Barrett Corporation Drilling Program #16-12D-36 BTR Duchesne County, Utah

#### 8. Anticipated Abnormal Pressures or Temperatures

No abnormal pressures or temperatures or other hazards are anticipated.

Maximum anticipated bottom hole pressure equals approximately 5605 psi\* and maximum anticipated surface pressure equals approximately 3160 psi\*\* (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

\*Max Mud Wt x 0.052 x TD = A (bottom hole pressure)

### 9. <u>Auxiliary Equipment</u>

- a) Upper kelly cock; lower Kelly cock will be installed while drilling
- b) Inside BOP or stab-in valve (available on rig floor)
- c) Safety valve(s) and subs to fit all string connections in use
- d) Mud monitoring will be visually observed

#### 10. Location and Type of Water Supply

Water for the drilling and completion will be trucked from the Duchesne City Culinary Water Dock located in Sec. 1, T4S, R5W.

#### 11. <u>Drilling Schedule</u>

Location Construction: January 2012 Spud: January 2012

Duration: 15 days drilling time

45 days completion time

<sup>\*\*</sup>Maximum surface pressure = A - (0.22 x TD)

### PRESSURE CONTROL EQUIPMENT – Schematic Attached

# A. Type: Eleven (11) Inch Double Gate Hydraulic BOP with Eleven (11) Inch Annular Preventer. The blow out preventer will be equipped as follows:

- 1. One (1) blind ram (above).
- 2. One (1) pipe ram (below).
- 3. Drilling spool with two (2) side outlets (choke side 3-inch minimum, kill side 2-inch minimum).
- 4. 3-inch diameter choke line.
- 5. Two (2) choke line valves (3-inch minimum).
- 6. Kill line (2-inch minimum).
- 7. Two (2) chokes with one (1) remotely controlled from the rig floor.
- 8. Two (2) kill line valves, and a check valve (2-inch minimum).
- 9. Upper and lower kelly cock valves with handles available.
- 10. Safety valve(s) & subs to fit all drill string connections in use.
- 11. Inside BOP or float sub available.
- 12. Pressure gauge on choke manifold.
- 13. Fill-up line above the uppermost preventer.

### **B. Pressure Rating:** 5,000 psi

### C. Testing Procedure:

#### Annular Preventer

At a minimum, the Annular Preventer will be pressure tested to 50% of the rated working pressure for a period of ten (10) minutes or until provisions of the test are met, whichever is longer.

At a minimum the above pressure test will be performed:

- 1. When the annular preventer is initially installed;
- 2. Whenever any seal subject to test pressure is broken;
- 3. Following related repairs; and
- 4. At thirty (30) day intervals.

In addition, the Annular Preventer will be functionally operated at least weekly.

### **Blow-Out Preventer**

At a minimum, the BOP, choke manifold, and related equipment will be pressure tested to the approved working pressure of the BOP stack (if isolated from the surface casing by a test plug) or to 70% of the internal yieldstrength of the surface casing (if the BOP is not isolated from the casing by a test plug). Pressure will be

maintained for a period of at least ten (10) minutes or until the requirmentsof the test are met, whichever is longer.

At a minimum, the above pressure test will be performed:

- 1. When the BOP is initially installed;
- 2. Whenever any seal subject to test pressure is broken;
- 3. Following related repairs; and
- 4. At thirty (30) day intervals.

In addition the pipe and blind rams will be activated each trip, but not more than once each day. All BOP drills and tests will be recorded in the IADC driller's log.

### D. Choke Manifold Equipment:

All choke lines will be straight lines unless turns use tee blocks or are targeted with running tees, and will be anchored to prevent whip and vibration.

#### E. Accumulator:

The accumulator will have sufficient capacity to open the hydraulically-controlled choke line valve (if so equipped), close all rams plus the annular preventer, and retain a minimum of 200 psi above precharge on the closing manifold without the use of closing unit pumps. The fluid reservoir capacity will be double the usable fluid volume of the accumulator system capacity and the fluid level of the reservoir will be maintained at the manufacturer's recommendations.

The BOP system will have two (2) independent power sources to close the preventers. Nitrogen bottles (3 minimum) will be one (1) of these independent power sources and will maintain a charge equal to the manufacturer's specifications.

The accumulator precharge pressure test will be conducted prior to connecting the closing unit to the BOP stack and at least once every six (6) months thereafter. The accumulator pressure will be corrected if the measured precharge pressure is found to be above or below the maximum or minimum limits specified in the *Onshore Oil & Gas Order Number 2*.

A manual locking device (i.e. hand wheels) or automatic locking device will be installed on all systems of 2M or greater. A valve will be installed in the closing line as close as possible to the annular preventer to act as a locking device. This valve will be maintained in the open position and will be closed only when the power source for the accumulator is inoperative.

Remote controls shall be readily accessible to the driller. Remote controls for all 3M or greater systems will be capable of closing all preventers. Remote controls for 5M or greater systems will be capable of both opening and closing all preventers. Master controls will be at the accumulator and will be capable of opening and closing all preventers and the choke line valve (if so equipped).

#### F. Miscellaneous Information:

The Blow-Out Preventer and related pressure control equipment will be installed, tested and maintained in compliance with the specifications in and requirements of *Onshore Oil & Gas Order Number 2*. The hydraulic BOP closing unit will be located at least twenty-five (25) feet from the well head but readily accessible to the driller. Exact locations and configurations of the hydraulic BOP closing unit will depend upon the particular rig contracted to drill this hole.

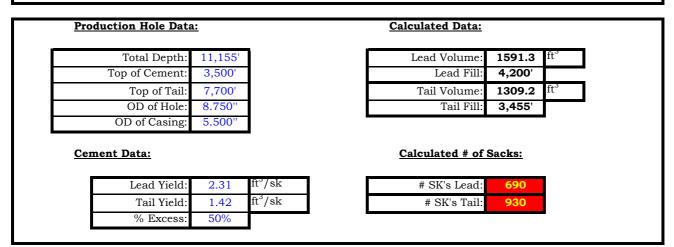
A flare line will be installed after the choke manifold, extending 125 feet (minimum) from the center of the drill hole to a separate flare pit.



### LAKE CANYON & BLACK TAIL RIDGE CEMENT VOLUMES

Well Name: <u>16-12D-36 BTR</u>

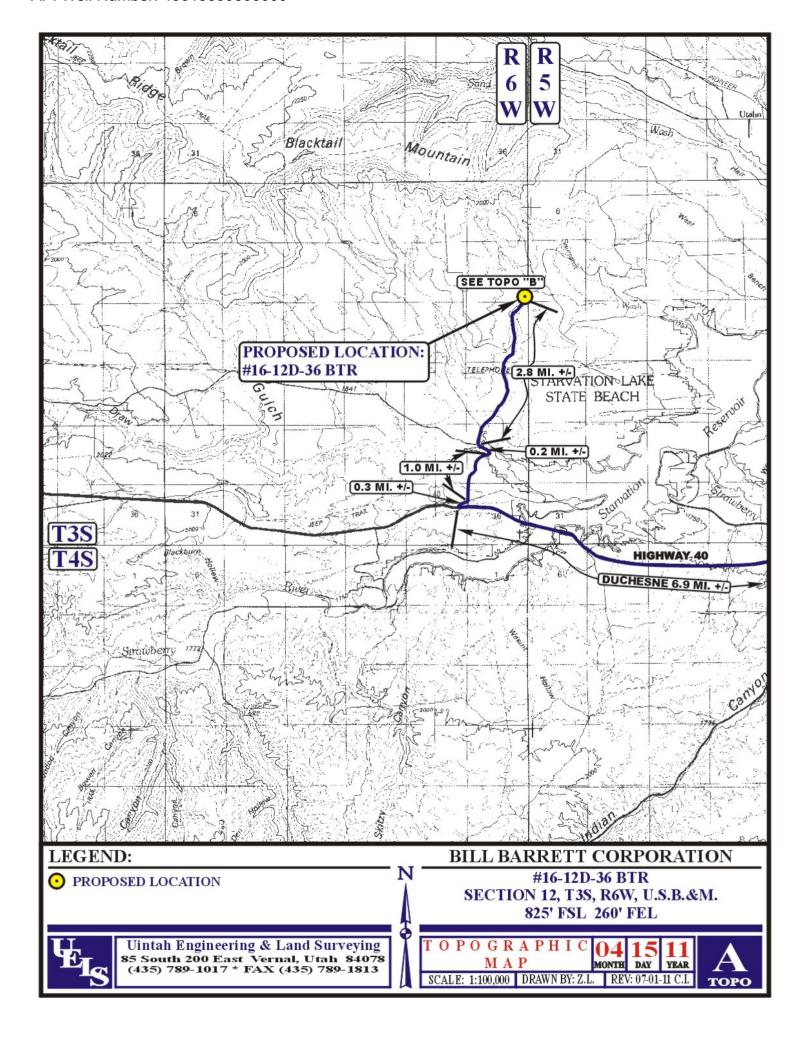
Surface Hole Data:				Calculated Data:		
Total Depth:	4,000'	Ì		Lead Volume:	1918.3	ft³
Top of Cement:	0'	1		Lead Fill:	3,500'	
OD of Hole:	12.250"	1		Tail Volume:	274.0	ft³
OD of Casing:	9.625"	1		Tail Fill:	500'	
Cement Data:			-	Calculated # of		_
ement Data:				Calculated # of	Sacks:	
Cement Data:  Lead Yield:	3.16	ft°/sk	]	Calculated # of  # SK's Lead:	Sacks: 620	ı
	3.16 75%	ft°/sk	]			ı
Lead Yield:		ft°/sk	]			ı
Lead Yield: % Excess: Top of Lead:	75% 0'		]	# SK's Lead:	620	<b>I</b>
Lead Yield: % Excess:	75%	ft°/sk ft°/sk	]		620	] ]
Lead Yield: % Excess: Top of Lead:	75% 0'		]	# SK's Lead:	620	1 1

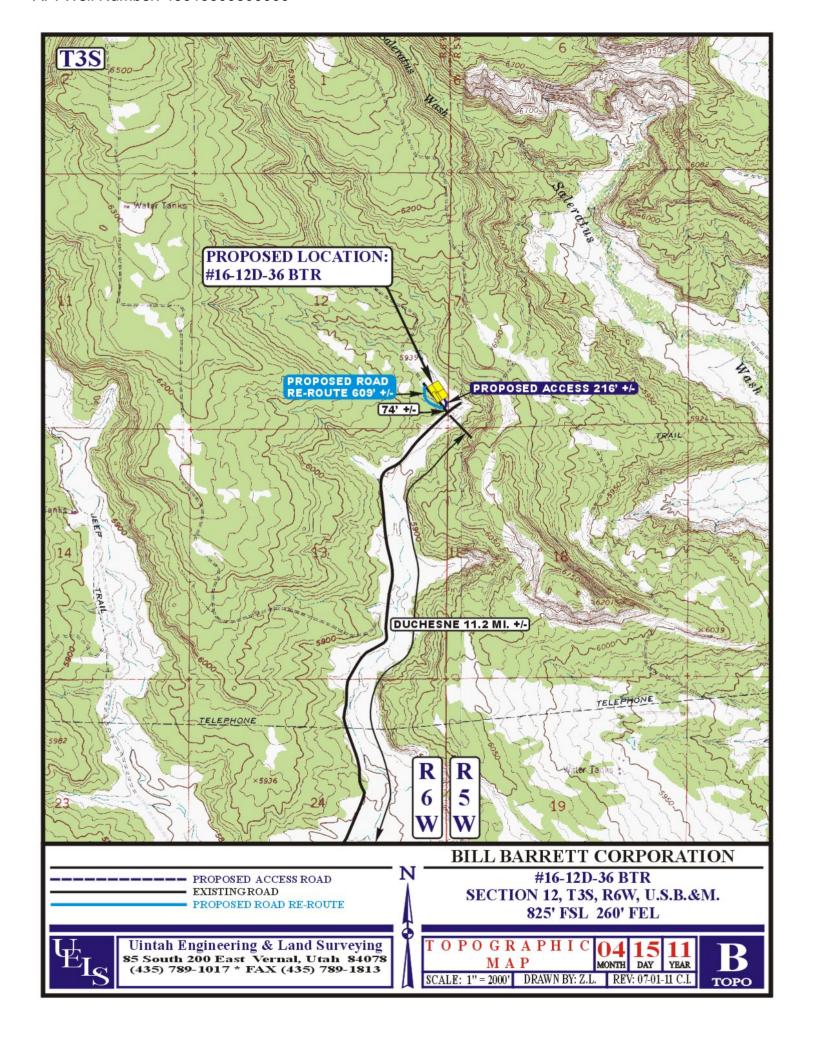


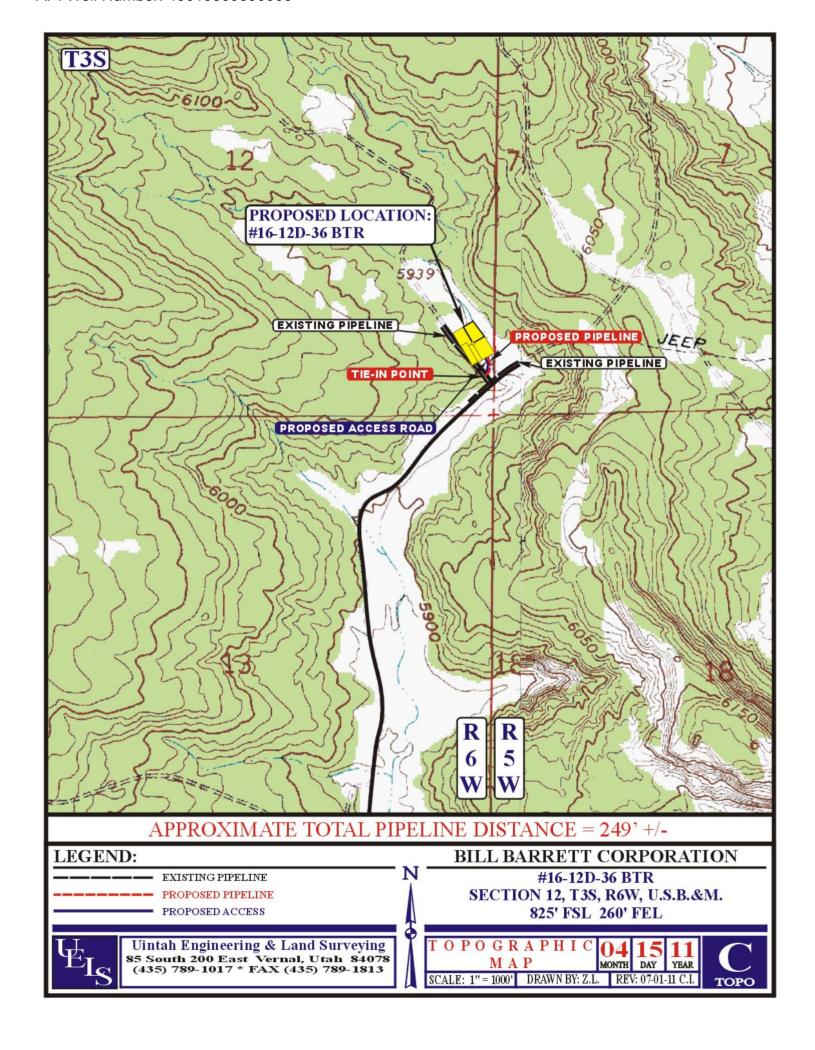
## 16-12D-36 BTR Proposed Cementing Program

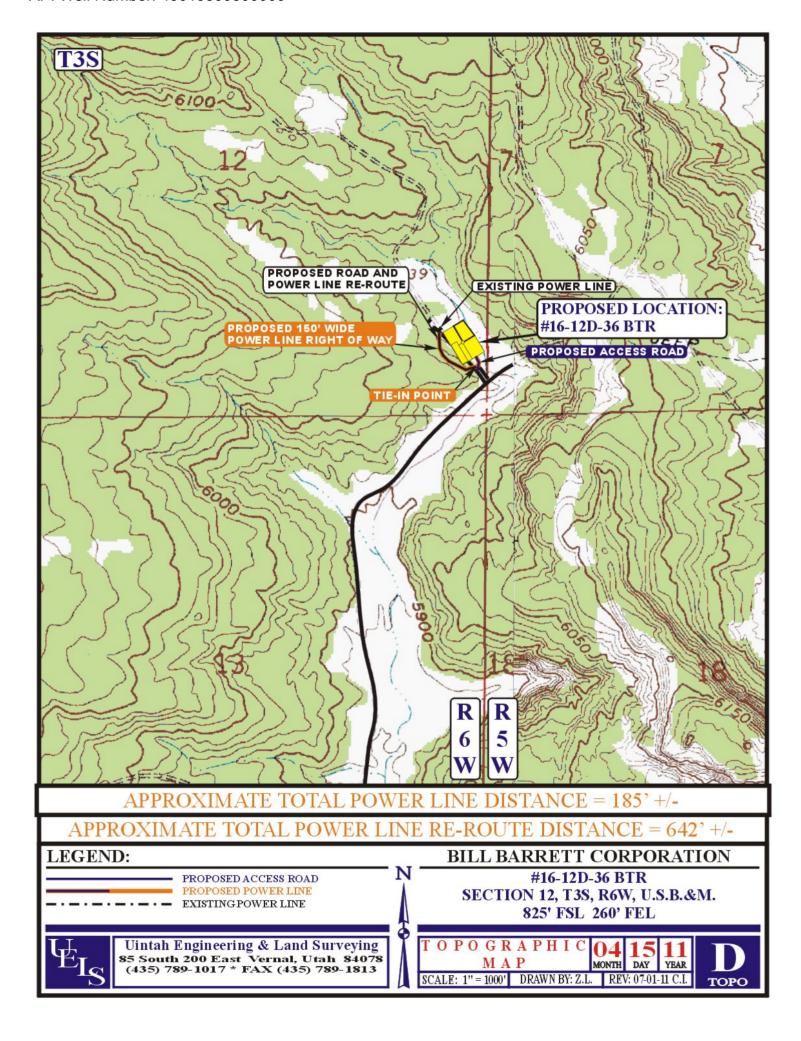
Job Recommendation		Sur	face Casing
Lead Cement - (3500' - 0')			
Halliburton Light Premium	Fluid Weight:	11.0	lbm/gal
5.0 lbm/sk Silicalite Compacted	Slurry Yield:	3.16	ft <sup>3</sup> /sk
0.25 lbm/sk Kwik Seal	Total Mixing Fluid:	19.48	Gal/sk
0.125 lbm/sk Poly-E-Flake	Top of Fluid:	0'	
2.0% Bentonite	Calculated Fill:	3,500'	
	Volume:	341.63	bbl
	Proposed Sacks:	620	sks
Tail Cement - (TD - 3500')			
Premium Cement	Fluid Weight:	14.8	lbm/gal
2.0% Calcium Chloride	Slurry Yield:	1.36	ft <sup>3</sup> /sk
	Total Mixing Fluid:	6.37	Gal/sk
	Top of Fluid:	3,500'	
	Calculated Fill:	500'	
	Volume:	48.80	bbl
	Proposed Sacks:	210	sks

Job Recommendation		Production Casing		
Lead Cement - (7700' - 3500')				
Tuned Light <sup>™</sup> System	Fluid Weight:	11.0	lbm/gal	
	Slurry Yield:	2.31	ft <sup>3</sup> /sk	
	Total Mixing Fluid:	10.65	Gal/sk	
	Top of Fluid:	3,500'		
	Calculated Fill:	4,200'		
	Volume:	283.41	bbl	
	Proposed Sacks:	690	sks	
Tail Cement - (11155' - 7700')				
Econocem <sup>TM</sup> System	Fluid Weight:	13.5	lbm/gal	
0.125 lbm/sk Poly-E-Flake	Slurry Yield:	1.42	ft <sup>3</sup> /sk	
1.0 lbm/sk Granulite TR 1/4	Total Mixing Fluid:	6.61	Gal/sk	
	Top of Fluid:	7,700'		
	Calculated Fill:	3,455'		
	Volume:	233.16	bbl	
	Proposed Sacks:	930	sks	







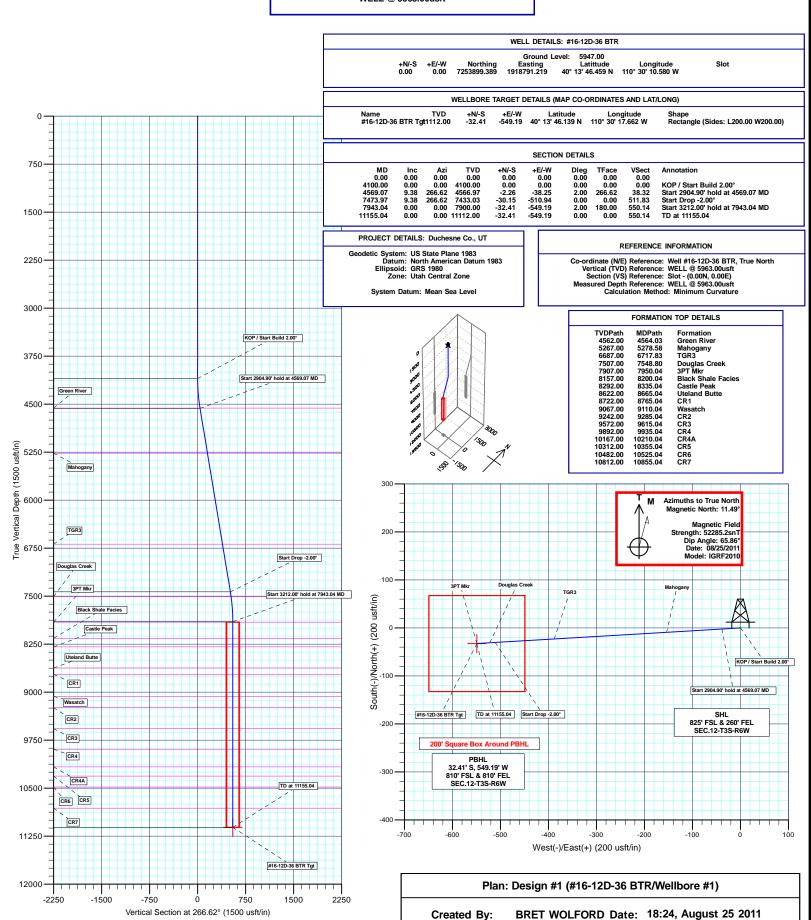




Bill Barrett Corp.
Project: Duchesne Co., UT
Site: Sec.12-T3S-R6W
Well: #16-12D-36 BTR
Wellbore: Wellbore #1
Design: Design #1
Latitude: 40° 13' 46.459 N
Longitude: 110° 30' 10.580 W
Ground Level: 5947.00
WELL @ 5963.00usft



<del>ocpicinoci</del>





### **Great White Directional Services, LLC**

**Planning Report** 



Database: EDM 5000.1 EDMDBBW
Company: Bill Barrett Corp.
Project: Duchesne Co., UT
Site: Sec.12-T3S-R6W
Well: #16-12D-36 BTR
Wellbore: Wellbore #1
Design: Design #1

Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference: Survey Calculation Method: Well #16-12D-36 BTR WELL @ 5963.00usft WELL @ 5963.00usft True Minimum Curvature

Project Duchesne Co., UT

Map System: US State Plane 1983

Geo Datum: North American Datum 1983

Map Zone: Utah Central Zone

System Datum: Mean Sea Level

Site Sec.12-T3S-R6W

Northing: 7,253,899.393 usft Site Position: Latitude: 40° 13' 46.459 N From: Lat/Long Easting: 1,918,791.219 usft Longitude: 110° 30' 10.580 W **Position Uncertainty:** 0.00 usft Slot Radius: 13-3/16" **Grid Convergence:** 0.64 °

Well #16-12D-36 BTR

**Well Position** +N/-S 0.00 usft Northing: 7,253,899.389 usft Latitude: 40° 13' 46.459 N +E/-W 0.00 usft Easting: 1,918,791.219 usft Longitude: 110° 30' 10.580 W **Position Uncertainty** 0.00 usft Wellhead Elevation: usft **Ground Level:** 5,947.00 usft

Wellbore Wellbore #1 Magnetics **Model Name** Sample Date Declination **Dip Angle** Field Strength (nT) (°) (°) 08/25/11 IGRF2010 11.49 65.86 52.285

Design #1 Design Audit Notes: Version: Phase: PLAN Tie On Depth: 0.00 Vertical Section: Depth From (TVD) +N/-S +E/-W Direction (usft) (usft) (usft) (°) 11,112.00 0.00 0.00 266.62

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,569.07	9.38	266.62	4,566.97	-2.26	-38.25	2.00	2.00	0.00	266.62	
7,473.97	9.38	266.62	7,433.03	-30.15	-510.94	0.00	0.00	0.00	0.00	
7,943.04	0.00	0.00	7,900.00	-32.41	-549.19	2.00	-2.00	0.00	180.00	
11,155.04	0.00	0.00	11,112.00	-32.41	-549.19	0.00	0.00	0.00	0.00	



### **Great White Directional Services, LLC**

Planning Report



Database: EDM 5000.1 EDMDBBW

Company: Bill Barrett Corp.
Project: Duchesne Co., UT
Site: Sec.12-T3S-R6W
Well: #16-12D-36 BTR
Wellbore: Wellbore #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well #16-12D-36 BTR WELL @ 5963.00usft WELL @ 5963.00usft

True Minimum Curvature

esign:	Design #1								
anned Survey									
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Vertical Section	Dogleg Rate	Build Rate	Turn Rate
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3.700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP / Start I		5.55	.,	0.00	5.53	5.55	0.00	5.53	3.33
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	2.00	266.62	4,199.98	-0.10	-1.74	1.75	2.00	2.00	0.00
4,300.00	4.00	266.62	4,299.84	-0.41	-6.97	6.98	2.00	2.00	0.00
4,400.00	6.00	266.62	4,399.45	-0.92	-15.67	15.69	2.00	2.00	0.00
4,500.00	8.00	266.62	4,498.70	-1.64	-27.83	27.88	2.00	2.00	0.00
Green River			,		,			,	
4,564.03	9.28	266.62	4,562.00	-2.21	-37.43	37.50	2.00	2.00	0.00
	0' hold at 4569.0								
4,569.07	9.38	266.62	4,566.97	-2.26	-38.25	38.32	2.00	2.00	0.00
4,600.00	9.38	266.62	4,597.49	-2.55	-43.28	43.36	0.00	0.00	0.00
4,700.00	9.38	266.62	4,696.16	-3.51	-59.55	59.66	0.00	0.00	0.00



### **Great White Directional Services, LLC**

Planning Report



Database: EDM 5000.1 EDMDBBW

Company: Bill Barrett Corp.
Project: Duchesne Co., UT
Site: Sec.12-T3S-R6W
Well: #16-12D-36 BTR
Wellbore: Wellbore #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well #16-12D-36 BTR WELL @ 5963.00usft WELL @ 5963.00usft

True Minimum Curvature

Wellbore:	Wellbore #1								
Design:	Design #1								
Planned Survey									
Measured Depth (usft)	Inclination	Azimuth	Vertical Depth (usft)	+N/-S	+E/-W	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
	(°)	(°)		(usft)	(usft)				
4,800.00 4,900.00 5,000.00 5,100.00 5,200.00	9.38 9.38 9.38 9.38 9.38	266.62 266.62 266.62 266.62 266.62	4,794.82 4,893.48 4,992.14 5,090.81 5,189.47	-4.47 -5.44 -6.40 -7.36 -8.32	-75.83 -92.10 -108.37 -124.64 -140.92	75.96 92.26 108.56 124.86 141.16	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
Mahogany									
5,278.58 5,300.00 5,400.00 5,500.00 5,600.00 5,700.00 5,800.00	9.38 9.38 9.38 9.38 9.38	266.62 266.62 266.62 266.62 266.62 266.62	5,267.00 5,288.13 5,386.79 5,485.46 5,584.12 5,682.78 5,781.44	-9.07 -9.28 -10.24 -11.20 -12.16 -13.12 -14.08	-153.70 -157.19 -173.46 -189.73 -206.00 -222.28 -238.55	153.97 157.46 173.76 190.06 206.36 222.66 238.96	0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00
5,900.00	9.38	266.62	5,880.11	-15.04	-254.82	255.26	0.00	0.00	0.00
6,000.00 6,100.00	9.38 9.38	266.62 266.62	5,978.77 6,077.43	-16.00 -16.96	-271.09 -287.36	271.56 287.86	0.00 0.00	0.00 0.00	0.00 0.00
6,200.00 6,300.00 6,400.00 6,500.00 6,600.00	9.38 9.38 9.38 9.38 9.38	266.62 266.62 266.62 266.62 266.62	6,176.09 6,274.76 6,373.42 6,472.08 6,570.74	-17.92 -18.88 -19.84 -20.80 -21.76	-303.64 -319.91 -336.18 -352.45 -368.73	304.17 320.47 336.77 353.07 369.37	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
6,700.00	9.38	266.62	6,669.41	-22.72	-385.00	385.67	0.00	0.00	0.00
TGR3	9.50	200.02	0,009.41	-22.12	-303.00	303.07	0.00	0.00	0.00
6,717.83 6,800.00 6,900.00 7,000.00 7,100.00	9.38 9.38 9.38 9.38	266.62 266.62 266.62 266.62	6,687.00 6,768.07 6,866.73 6,965.39 7,064.06	-22.89 -23.68 -24.64 -25.60 -26.56	-387.90 -401.27 -417.54 -433.81 -450.09	388.57 401.97 418.27 434.57 450.87	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
7,200.00 7,300.00	9.38 9.38	266.62 266.62	7,162.72 7,261.38	-27.52 -28.48	-466.36 -482.63	467.17 483.47	0.00 0.00	0.00 0.00	0.00 0.00
7,400.00	9.38	266.62	7,360.04	-29.44	-498.90	499.77	0.00	0.00	0.00
Start Drop -2.	00°								
7,473.97	9.38	266.62	7,433.03	-30.15	-510.94	511.83	0.00	0.00	0.00
7,500.00	8.86	266.62	7,458.73	-30.40	-515.06	515.95	2.00	-2.00	0.00
7,548.80 7,600.00 7,700.00 7,800.00	7.88 6.86 4.86 2.86	266.62 266.62 266.62 266.62	7,507.00 7,557.78 7,657.25 7,757.02	-30.81 -31.20 -31.80 -32.20	-522.15 -528.71 -538.90 -545.62	523.06 529.63 539.84 546.57	2.00 2.00 2.00 2.00	-2.00 -2.00 -2.00 -2.00	0.00 0.00 0.00 0.00
7,900.00	0.86	266.62	7,856.96	-32.39	-548.87	549.82	2.00	-2.00	0.00
	' hold at 7943.04		.,	32.00	- 10.07	0.02	2.00	2.00	00
7,943.04	0.00	0.00	7,900.00	-32.41	-549.19	550.14	2.00	-2.00	0.00
3PT Mkr									
7,950.04	0.00	0.00	7,907.00	-32.41	-549.19	550.14	0.00	0.00	0.00
8,000.00 8,100.00	0.00 0.00	0.00 0.00	7,956.96 8,056.96	-32.41 -32.41	-549.19 -549.19	550.14 550.14	0.00 0.00	0.00 0.00	0.00 0.00
8,200.00	0.00	0.00	8,156.96	-32.41	-549.19	550.14	0.00	0.00	0.00
Black Shale F									
8,200.04 8,300.00	0.00 0.00	0.00 0.00	8,157.00 8,256.96	-32.41 -32.41	-549.19 -549.19	550.14 550.14	0.00 0.00	0.00 0.00	0.00 0.00
Castle Peak									
8,335.04 8,400.00	0.00 0.00	0.00 0.00	8,292.00 8,356.96	-32.41 -32.41	-549.19 -549.19	550.14 550.14	0.00 0.00	0.00 0.00	0.00 0.00



### **Great White Directional Services, LLC**

Planning Report



Database: EDM 5000.1 EDMDBBW Company: Bill Barrett Corp.

 Project:
 Duchesne Co., UT

 Site:
 Sec.12-T3S-R6W

 Well:
 #16-12D-36 BTR

 Wellbore:
 Wellbore #1

 Design:
 Design #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well #16-12D-36 BTR WELL @ 5963.00usft WELL @ 5963.00usft

True Minimum Curvature

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,500.00 8,600.00	0.00 0.00	0.00 0.00	8,456.96 8,556.96	-32.41 -32.41	-549.19 -549.19	550.14 550.14	0.00 0.00	0.00 0.00	0.00 0.00
Uteland Butte									
8,665.04 8,700.00	0.00 0.00	0.00 0.00	8,622.00 8,656.96	-32.41 -32.41	-549.19 -549.19	550.14 550.14	0.00 0.00	0.00 0.00	0.00 0.00
CR1 8,765.04	0.00	0.00	8,722.00	-32.41	-549.19	550.14	0.00	0.00	0.00
•									
8,800.00 8,900.00 9,000.00 9,100.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	8,756.96 8,856.96 8,956.96 9,056.96	-32.41 -32.41 -32.41 -32.41	-549.19 -549.19 -549.19 -549.19	550.14 550.14 550.14 550.14	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
Wasatch									
9,110.04	0.00	0.00	9,067.00	-32.41	-549.19	550.14	0.00	0.00	0.00
9,200.00 <b>CR2</b>	0.00	0.00	9,156.96	-32.41	-549.19	550.14	0.00	0.00	0.00
9,285.04 9,300.00 9,400.00 9,500.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	9,242.00 9,256.96 9,356.96 9,456.96	-32.41 -32.41 -32.41 -32.41	-549.19 -549.19 -549.19 -549.19	550.14 550.14 550.14 550.14	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
9,600.00	0.00	0.00	9,556.96	-32.41	-549.19	550.14	0.00	0.00	0.00
9,615.04 9,700.00 9,800.00	0.00 0.00 0.00	0.00 0.00 0.00	9,572.00 9,656.96 9,756.96	-32.41 -32.41 -32.41	-549.19 -549.19 -549.19	550.14 550.14 550.14	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00
9,900.00	0.00	0.00	9,856.96	-32.41	-549.19	550.14	0.00	0.00	0.00
9,935.04 10,000.00 10,100.00 10,200.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	9,892.00 9,956.96 10,056.96 10,156.96	-32.41 -32.41 -32.41 -32.41	-549.19 -549.19 -549.19 -549.19	550.14 550.14 550.14 550.14	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
CR4A			,						
10,210.04 10,300.00	0.00	0.00 0.00	10,167.00 10,256.96	-32.41 -32.41	-549.19 -549.19	550.14 550.14	0.00 0.00	0.00 0.00	0.00 0.00
CR5 10,355.04 10,400.00	0.00	0.00	10,312.00 10,356.96	-32.41 -32.41	-549.19 -549.19	550.14 550.14	0.00	0.00	0.00
10,500.00 <b>CR6</b>	0.00	0.00	10,456.96	-32.41	-549.19	550.14	0.00	0.00	0.00
10,525.04	0.00	0.00	10,482.00	-32.41	-549.19	550.14	0.00	0.00	0.00
10,600.00 10,700.00 10,800.00	0.00 0.00 0.00	0.00 0.00 0.00	10,556.96 10,656.96 10,756.96	-32.41 -32.41 -32.41	-549.19 -549.19 -549.19	550.14 550.14 550.14	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00
CR7 10,855.04		0.00		-32.41		550.14	0.00	0.00	0.00
10,855.04 10,900.00 11,000.00	0.00 0.00 0.00	0.00	10,812.00 10,856.96 10,956.96	-32.41 -32.41 -32.41	-549.19 -549.19 -549.19	550.14 550.14 550.14	0.00	0.00 0.00 0.00	0.00
11,100.00	0.00 0.00 <b>04 - #16-12D-36</b>	0.00	11,056.96	-32.41 -32.41	-549.19 -549.19	550.14	0.00	0.00	0.00



### **Great White Directional Services, LLC**

Planning Report



Database: EDM 5000.1 EDMDBBW
Company: Bill Barrett Corp.
Project: Duchesne Co., UT
Site: Sec.12-T3S-R6W
Well: #16-12D-36 BTR
Wellbore: Wellbore #1
Design: Design #1

Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference: Survey Calculation Method: Well #16-12D-36 BTR WELL @ 5963.00usft WELL @ 5963.00usft True Minimum Curvature

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
#16-12D-36 BTR Tgt - plan hits target ce - Rectangle (sides			11,112.00	-32.41	-549.19	7,253,860.859	1,918,242.425	40° 13' 46.139 N	110° 30' 17.662 W

Formations						
	Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
	4,564.03	4,562.00	Green River		0.00	
	5,278.58	5,267.00	Mahogany		0.00	
	6,717.83	6,687.00	TGR3		0.00	
	7,548.80	7,507.00	Douglas Creek		0.00	
	7,950.04	7,907.00	3PT Mkr		0.00	
	8,200.04	8,157.00	Black Shale Facies		0.00	
	8,335.04	8,292.00	Castle Peak		0.00	
	8,665.04	8,622.00	Uteland Butte		0.00	
	8,765.04	8,722.00	CR1		0.00	
	9,110.04	9,067.00	Wasatch		0.00	
	9,285.04	9,242.00	CR2		0.00	
	9,615.04	9,572.00	CR3		0.00	
	9,935.04	9,892.00	CR4		0.00	
	10,210.04	10,167.00	CR4A		0.00	
	10,355.04	10,312.00	CR5		0.00	
	10,525.04	10,482.00	CR6		0.00	
	10,855.04	10,812.00	CR7		0.00	

Plan Annotations				
Measured	Vertical	Local Coor	dinates	
Depth	Depth	+N/-S	+E/-W	
(usft)	(usft)	(usft)	(usft)	Comment
4,100.00	4,100.00	0.00	0.00	KOP / Start Build 2.00°
4,569.07	4,566.97	-2.26	-38.25	Start 2904.90' hold at 4569.07 MD
7,473.97	7,433.03	-30.15	-510.94	Start Drop -2.00°
7,943.04	7,900.00	-32.41	-549.19	Start 3212.00' hold at 7943.04 MD
11,155.04	11,112.00	-32.41	-549.19	TD at 11155.04

### SURFACE DAMAGE AND RIGHT-OF-WAY SETTLEMENT AGREEMENT

This Agreement, made and entered into this the <u>1st</u> day of <u>August</u>, <u>2011</u>, by and between <u>Cleade and Deborah Ivie</u>, <u>4556 W 4805 S</u>, <u>Salt Lake City</u>, <u>UT 84118-5327</u>, ("Surface Owner"), and, <u>Bill Barrett Corporation</u>, <u>1099 18<sup>th</sup> Street</u>, <u>Suite 2300</u>, <u>Denver CO 80202</u>, ("BBC").

#### WITNESSETH THAT:

WHEREAS, BBC owns undivided interests in certain oil and gas leases ("Leases") covering and affecting Section 12, Township 3 South, Range 6 West, USM, of Duchesne County, Utah; and,

WHEREAS, such leases grant to BBC the right and privilege of ingress, egress, exploring, drilling, mining, operating for, producing and owning oil and gas and all other products produced therewith, together with the right to make surveys on said lands, lay pipelines, construct roads and bridges, dig canals, build power stations, telephone lines, employee houses and other structures on said lands, necessary or useful in BBC's operations; and,

WHEREAS, BBC, pursuant to its rights under the Leases, intends to drill the #16-12D-36 BTR well at a legal drill-site location in the SE1/4SE1/4 of Section 12, Township 3 South, Range 6 West, USM, Duchesne County, Utah; and,

WHEREAS, Surface Owner warrants ownership to the surface of at least specific portions of the <u>SE1/4SE1/4 of Section 12</u>, <u>Township 3 South, Range 6 West, USM, Duchesne County, Utah</u>, and which warranted ownership is further subject to all oil, gas and other mineral rights which are reserved for the use and benefit of the owners thereof; and,

Vell Number: 4301	3509800000		· ·	
this Agreement	d its heirs, successors and shall install cu uring the life of the A	lverts where neces	naintain all roads us sary to insure adeq	ed pursuant ( Juate drainag
this Agreement from all roads d  BBC sha	and shall install cu	lverts where neces, agreement.  und gates damaged l	sary to insure adeq	juate drainag

operations on the lands subject to this Agreement.

Surface Owner and their heirs or assigns shall have full access and use of the road built pursuant to this Agreement.

This Agreement shall inure to the benefit of the parties hereto, their heirs, successors and assigns and shall be a burden running with the land.

This Agreement may be executed in any number of counterparts and all such counterparts shall be deemed to constitute a single Agreement and the execution of one counterpart by any party hereto shall have the same force and effect as if said party had signed all other counterparts.

IN WITNESS WHEREOF, the parties have executed this Surface Damage Settlement Agreement effective as of the  $1^{st}$  day of August, 2011.

SURFACE OWNERS:	BILL BARRETT CORPORATION:
By: Cleade Ivie	By: Clint W. Turner As Agent for Bill Barrett Corporation
By: Oliverah Oliv Deborah Ivie	
STATE OF UTAH  COUNTY OF Utah  )	
Ivie, known to me to be the person whos	, 2011, personally appeared before me <u>Cleade</u> e name is subscribed to the foregoing instrument ated the same for the purpose and consideration
My Commission Expires: Left 10	Notary Public Residing at: Salt Lake City
STATE OF UTAH ) COUNTY OF )	PORTIA MILA Notary Public State of Utah My Commission Expires on: June 25, 2015 Comm. Number: 610669
Ivie, known to me to be the person whos	, 2011, personally appeared before me <u>Deborah</u> e name is subscribed to the foregoing instrument ited the same for the purpose and consideration
My Commission Expires: U/25/20	Notary Public Residing at: Salt Lake Cuty  PORTIA MILA
STATE OF UTAH )	Notary Public State of Utah My Commission Expires on: June 25, 2015 Comm. Number: 610669
COUNTY OF SALT LAKE )	
Turner, who, being by me dily sworn	
DANIEL WILLIAM COSTLEY  NOTARY PUBLIC-STATE OF UTAH  COMMISSION# 600945	Page 3 of 4 SALT LAKE CATY JUTA

#### **SURFACE USE PLAN**

#### **BILL BARRETT CORPORATION**

#### 16-12D-36 BTR Well Pad

SE SE, 825' FSL and 260' FEL, Section 12, T3S-R6W, USB&M (surface hole) SE SE, 810' FSL and 810' FEL, Section 12, T3S-R6W, USB&M (bottom hole) Duchesne County, Utah

The onsite inspection for this pad occurred on September 7, 2011. Site specific notes, conditions or changes as a result of that onsite are indicated below. Plat changes requested at the onsite are reflected within this APD.

- a. 16 mil minimum liner thickness required;
- b. Jed Burton (neighbor) wants dust controlled since wife has asthma;
- c. Work with county on road culverts if drainage impoundment becomes an issue for the pad;
- d. Round corner 8 and armor with rock;
- e. Leave existing gate in place and construct our own gate at the existing fence;
- f. Production equipment to be located near access entrance.

The excavation contractor would be provided with an approved copy of the surface use plan of operations before initiating construction.

### 1. <u>Existing Roads:</u>

- a. The proposed well site is located approximately 11.3 miles northwest of Duchesne, Utah. Maps and directions reflecting the route to the proposed well site are included (see Topographic maps A and B).
- b. The Utah Department of Transportation maintained Highway 40 would be utilized for 6.9 miles to the existing Duchesne County maintained Koch Road that would be utilized for 1.5 miles to the El Paso maintained E-1 pad that would be utilized for 2.8 miles and provides access to the planned new access road.
- c. Project roads would require routine year-round maintenance to provide year-round access. Maintenance would include inspections, reduction of ruts and holes, maintenance to keep water off the road, replacement of surfacing materials, and clearing of sediment blocking ditches and culverts. Should snow removal become necessary, roads would be cleared with a motor grader and snow would be stored along the down gradient side to prohibit runoff onto the road. Aggregate would be used as necessary to maintain a solid running surface and minimize dust generation.
- d. Vehicle operators would obey posted speed restrictions and observe safe speeds commensurate with road and weather conditions. Travel would be limited to the existing access roads and proposed access road.

- e. The use of roads under State and Duchesne County Road Department maintenance are necessary to access the project area with no improvements proposed. No encroachment or pipeline crossing permits are required.
- f. All existing roads would be maintained and kept in good repair during all phases of operation.

#### 2. Planned Access Road:

- a. Approximately 74 feet of new access road with 609 feet of existing access road reroute trending northwest is planned from the existing El Paso maintained E-1 access road across entirely private surface (see Topographic Map B).
- b. The planned access road would be constructed to a 30-foot ROW width with an 18-foot travel surface. See section 12.d. below for disturbance estimates.
- c. New road construction and improvements of existing roads would typically require the use of motor graders, crawler tractors, 10-yard end dump trucks, and water trucks. The standard methodology for building new roads involves the use of a crawler tractor or track hoe to windrow the vegetation to one side of the road corridor, remove topsoil to the opposing side of the corridor, and rough-in the roadway. This is followed by a grader or bulldozer to establish barrow ditches and crown the road surface. Where culverts are required, a track hoe or backhoe would trench the road and install the culverts. Some hand labor would be required when installing and armoring culverts. Road base or gravel in some instances would be necessary and would be hauled in and a grader used to smooth the running surface.
- d. The proposed road would be constructed to facilitate drainage, control erosion and minimize visual impacts by following natural contours where practical. No unnecessary side-casting of material would occur on steep slopes.
- e. A maximum grade of 10% would be maintained throughout the project with minimum cuts and fills, as necessary, to access the well.
- f. Excess rock from construction of the pad may be used for surfacing of the access road if necessary. Any additional aggregate necessary would be obtained from private or State of Utah lands in conformance with applicable regulations. Aggregate would be of sufficient size, type, and amount to allow all weather access and alleviate dust.
- g. Where topsoil removal is necessary, it would be windrowed (i.e. stockpiled/accumulated along the edge of the ROW and in a low row/pile parallel with the ROW) and re-spread over the disturbed area after construction and backfilling are completed. Vegetation removed from the disturbed area would also be re-spread to provide protection, nutrient recycling, and a seed source for reclamation.

- h. Turnouts are not proposed.
- i. No culverts or low-water crossings are anticipated. Adequate drainage structures, where necessary, would be incorporated into the remainder of the road to prevent soil erosion and accommodate all-weather traffic.
- j. One locking security gate and no cattle guards are anticipated at this time.
- k. Surface disturbance and vehicular travel would be limited to the approved location access road. Adequate signs would be posted, as necessary, to warn the public of project related traffic.
- All access roads and surface disturbing activities would conform to the appropriate standard, **no higher than necessary**, to accommodate their intended function adequately as outlined in the Bureau of Land Management and Forest Service publication: <u>Surface Operating Standards for Oil and Gas Exploration</u> and Development, Fourth Edition – Revised 2007.
- m. The operator would be responsible for all maintenance needs of the new access road.

### 3. Location of Existing Wells (see One-Mile Radius Map):

a. Following is a list of wells with surface hole locations within a one-mile radius of the proposed pad:

i.	water wells	none
ii.	injection wells	none
iii.	disposal wells	none
iv.	drilling wells	none
v.	temp shut-in wells	none
vi.	producing wells	four
vii.	abandoned wells	four

### 4. <u>Location of Production Facilities</u>

- a. Surface facilities would consist of a wellhead, separator, gas meter, (1) 500 gal methanol tank, (1) 500 glycol tank, (3) 500 bbl oil tanks, (1) 500 bbl water tank, (1) 500 bbl test tank, (1) 1000 gal propane tank, a pumping unit or Roto-flex unit or gas lift unit with a natural gas fired motor, solar panels, solar chemical and methanol pumps and one trace pump. See attached proposed facility diagram.
- b. Most wells would be fitted with a pump jack or Roto-flex unit or gas lift to assist liquid production if liquid volumes and/or low formation pressures require it. Plunger lift systems do not require any outside source of energy. The prime mover for pump jacks or Roto-flex units would be small (75 horsepower or less), natural gas-fired internal combustion engines.

If a gas lift is installed, it would be set on a 10 ft x 15 ft pad and the prime mover would be a natural gas-fired internal combustion engine rated at 200 horsepower or less or an electric compressor of similar horsepower powered by a generator.

- c. The tank battery would be surrounded by a secondary containment berm of sufficient capacity to contain 1.1 times the entire capacity of the largest single tank and sufficient freeboard to contain precipitation. All loading lines and valves would be placed inside the berm surrounding the tank battery or would utilize catchment basins to contain spills. All liquid hydrocarbon production and measurement shall conform to the provisions of 43 CFR 3162.7-2 and Onshore Oil and Gas Order No. 4 for the measurement of oil.
- d. Gas meter run(s) would be constructed and located on lease within 500 feet of the wellheads. Meter runs would be housed and/or fenced. As practicably feasible, meters would be equipped with remote telemetry monitoring systems. All gas production and measurement shall comply with the provisions of 43 CFR 3162.7-3, Onshore Oil and Gas Order No. 5, and American Gas Association (AGA) Report No. 3.
- e. A combustor may be installed at this location for control of associated condensate tank emissions. A combustor ranges from 24 inches to 48 inches wide and is approximately 27 ft tall. Combustor placement would be on existing disturbance.
- f. Approximately 249 feet of pipeline corridor (see Topographic Map C) containing up to three lines (one gas pipeline up to 8 inch in diameter, one water line up to 4 inch in diameter and one residue line up to 4 inch in diameter) is proposed trending southeast to the existing El Paso maintained E-1 pipeline corridor. Pipelines would be constructed of steel, polyethylene or fiberglass and would connect to the proposed pipeline servicing nearby BBC and El Paso wells. The pipeline crosses entirely private surface.
- g. The new segment of gas pipeline would be surface laid within a 30 foot wide pipeline corridor adjacent to the proposed access road. See 12.d below for disturbance estimates.
- h. Construction of the ROW would temporarily utilize the 30 foot disturbed width for the road for a total disturbed width of 60 foot for the road and pipeline corridors. The use of the proposed well site and access roads would facilitate the staging of the pipeline construction.
- i. Pipeline construction methods and practices would be planned and conducted by BBC with the objective of enhancing reclamation and fostering the reestablishment of the native plant community.
- j. All permanent above-ground structures would be painted a flat, non-reflective color, such as Beetle Green, to match the standard environmental colors. All facilities would be painted the designated color at the time of installation.

Facilities required to comply with the Occupational Safety and Health Act (OSHA) may be excluded.

- k. Site security guidelines identified in 43 CFR 3162.7-5 and Onshore Oil and Gas Order No. 3 would be adhered to. Any modifications to proposed facilities would be reflected in the site security diagram submitted.
- 1. The site would require periodic maintenance to ensure that drainages are kept open and free of debris, and that surfaces are properly treated to reduce erosion, fugitive dust, and impacts to adjacent areas.
- 5. <u>Location and Type of Water Supply:</u>
  - a. Water for the drilling and completion would be trucked from any of the following locations:

Water Right No. and Application or Change No.	Applicant	Allocation	Date	Point of Diversion	Source
43-180	Duchesne City Water Service District	5 cfs	8/13/2004	Knight Diversion Dam	Duchesne River
43-1202, Change a13837	Myton City	5.49 cfr and 3967 acre feet	3/21/1986	Knight Diversion Dam	Duchesne River
43-10444, Appln A57477	Duchesne County Upper Country Water	2 cfs	1994	Ditch at Source	Cow Canyon Spring
43-10446, Appln F57432	Duchesne County Upper Country Water	1.58 cfs	1994	Ditch at Source	Cow Canyon Spring
43-1273, Appln A17462	J.J.N.P. Company	7 cfs	1946	Strawberry River	Strawberry River
43-1273, Appln t36590	J.J.N.P. Company	4 cfs	6/03/2010	Strawberry River	Strawberry River

- b. No new water well is proposed with this application.
- c. Should additional water sources be pursued they would be properly permitted through the State of Utah Division of Water Rights.
- d. Water use would vary in accordance with the formations to be drilled but would be up to approximately 5.41 acre feet for drilling and completion operations.

Bill Barrett Corporation Surface Use Plan #16-12D-36 BTR Duchesne County, UT

### 6. <u>Source of Construction Material:</u>

- a. The use of materials would conform to 43 CFR 3610.2-3.
- b. No construction materials would be removed from the lease or EDA area.
- c. If any additional gravel is required, it would be obtained from a local supplier having a permitted source of materials within the general area.

#### 7. Methods of Handling Waste Disposal:

- a. All wastes associated with this application would be contained and disposed of utilizing approved facilities.
- b. The reserve pit would be constructed so as not to leak, break or allow any discharge.
- c. The reserve would be lined with 16 mil (minimum) thickness polyethylene nylon reinforced liner material. The liner(s) would overlay straw, dirt and/or bentonite if rock is encountered during excavation. The liner would overlap the pit walls and be covered with dirt and/or rocks to hold them in place. No trash, scrap pipe, or other materials that could puncture the liner would be discarded in the pit. A minimum of two feet of free board would be maintained between the maximum fluid level and the top of the reserve pit at all times.
- d. To deter livestock from entering the pit, the three sides exterior to the location would be fenced before drilling starts. Following the conclusion of drilling and completion activities, the fourth side would also be fenced.
- e. Drill cuttings would be contained in the pit and buried on-site for a period not to exceed six months, weather permitting
- f. Produced fluids from the well other than water would be decanted into steel test tank(s) until such time as construction of production facilities is completed. Any oil that may be accumulated would be transferred to a permanent production tank. Produced water may be used in further drilling and completion activities, evaporated in the pit, or would be hauled to one of the state-approved disposal facilities below:

#### **Disposal Facilities**

- 1. RNI Industries, Inc. Pleasant Valley Disposal Pits, Sec. 25, 26, 35 & 36, T4S-R3W
- 2. Pro Water LLC Blue Bench 13-1 Disposal Well (43-013-30971) NENE, Sec. 13, T3S-R5W
- 3. RN Industries, Inc. Bluebell Disposal Ponds, Sec. 2, 4 & 9, T2S-R2W
- 4. Water Disposal, Inc. Harmston 1-32-A1 Disposal Well (43-013-30224), UTR #00707, Sec. 32, T1S-R1W

Bill Barrett Corporation Surface Use Plan #16-12D-36 BTR Duchesne County, UT

#### **Disposal Facilities**

- 5. Unified Water Pits Sec. 31, T2S-R4W
- 6. Iowa Tank Line Pits 8500 BLM Fence Road, Pleasant Valley
- g. Any salts and/or chemicals, which are an integral part of the drilling system, would be disposed of in the same manner as the drilling fluid.
- h. Any spills of oil, condensate, produced or frac water, drilling fluids, or other potentially deleterious substances would be recovered and either returned to its origin or disposed of at an approved disposal site, most likely in Duchesne, Utah.
- i. Chemicals on the EPA's Consolidated List of Chemicals subject to reporting under Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) may be used or stored in quantities over reportable quantities. In the course of drilling, BBC could potentially store and use diesel fuel, sand (silica), hydrochloric acid, and CO<sub>2</sub> gas, all described as hazardous substances in 40 CFR Part 302, Section 302.4, in quantities exceeding 10,000 pounds. In addition, natural gas condensate and crude oil and methanol may be stored or used in reportable quantities. Small quantities of retail products (paint/spray paints, solvents {e.g., WD-40}, and lubrication oil) containing non-reportable volumes of hazardous substances may be stored and used on site at any time. No extremely hazardous substances, as defined in 40 CFR 355, would be used, produced, stored, transported or disposed of in association with the drilling, testing or completion of the wells.
- j. Portable toilets and trash containers would be located onsite during drilling and completion operations. A commercial supplier would install and maintain portable toilets and equipment and would be responsible for removing sanitary waste. Sanitary waste facilities (i.e. toilet holding tanks) would be regularly pumped and their contents disposed of at approved sewage disposal facilities in Duchesne, and/or Uintah Counties, in accordance with applicable rules and regulations regarding sewage treatment and disposal. Accumulated trash and nonflammable waste materials would be hauled to an approved landfill once a week or as often as necessary. All debris and waste materials not contained in the trash containers would be cleaned up, removed from the construction ROW, well pad, or worker housing location, and disposed of at an approved landfill. Trash would be cleaned up everyday.
- k. Sanitary waste equipment and trash bins would be removed from the Project Area upon completion of access road or pipeline construction; following drilling and completion operations at an individual well pad; when worker housing is no longer needed; or as required.
- 1. A flare pit may be constructed a minimum of 110' from the wellhead(s) and may be used during completion work. In the event a flare pit proves to be unworkable, a temporary flare stack or open top tank would be installed. BBC would flow back as much fluid and gas as possible into pressurized vessels,

separating the fluids from the gas. In some instances, due to the completion fluids utilized within the Project Area, it is not feasible to direct the flow stream from the wellbore through pressurized vessels. In such instances BBC proposes to direct the flow to the open top tanks until flow through the pressurized vessels is feasible. At which point the fluid would either be returned to the reserve pit or placed into a tank(s). The gas would be directed to the flare pit, flare stack (each with a constant source of ignition), or may be directed into the sales pipeline.

m. Hydrocarbons would be removed from the reserve pit would as soon as practical. In the event immediate removal is not practical, the reserve pit would be flagged overhead or covered with wire or plastic mesh to protect migrating birds.

#### 8. Ancillary Facilities:

- a. Garbage containers and portable toilets would be located on the well pad.
- b. On well pads where active drilling and completion is occurring, temporary housing would be provided on location for the well pad supervisor, geologist, tool pusher, and others that are required to be on location at all times. The well pad could include up to five single wide mobile homes or fifth wheel campers/trailers.
- c. A surface powerline corridor 185 feet in length with an existing powerline reroute of 642 feet is proposed for installation by third-party installer within a 150 foot wide powerline corridor adjacent to the proposed access road. See 12.d below for disturbance estimates.

#### 9. Well Site Layout:

- a. The well would be properly identified in accordance with 43 CFR 3162.6.
- b. The pad layout, cross section diagrams and rig layout are enclosed (see Figures 1 and 2).
- c. The pad and road designs are consistent with industry specifications.
- d. The pad has been staked at its maximum size of 400 feet x 275 feet with an inboard reserve pit size of 235 feet x 70 feet x 8 feet deep. See section 12.d below for disturbance estimates.
- e. Within the approved well pad location, a crawler tractor would strip whatever topsoil is present and stockpile it along the edge of the well pad for use during reclamation. Vegetation would be distributed along the sides of the well pad.
- f. Fill from pit excavation would be stockpiled along the edge of the pit and the adjacent edge of the well pad.

- g. Use of erosion control measures, including proper grading to minimize slopes, diversion terraces and ditches, mulching, terracing, riprap, fiber matting, temporary sediment traps, and broad-based drainage dips or low water crossings would be employed by BBC as necessary and appropriate to minimize erosion and surface runoff during well pad construction and operation. Cut and fill slopes would be constructed such that stability would be maintained for the life of the activity.
- h. All cut and fill slopes would be such that stability can be maintained for the life of the activity.
- i. Diversion ditches would be constructed, if necessary, around the well site to prevent surface waters from entering the well site area.
- j. Water application may be implemented if necessary to minimize the amount of fugitive dust.
- k. All surface disturbing activities would be supervised by a qualified, responsible company representative who is aware of the terms and conditions of the APD and specifications in the approved plans.

### 10. Plan for Restoration of the Surface:

- a. A site specific reclamation plan would be submitted, if requested, within 90 days of location construction to the surface managing agency or the fee landowners.
- b. Site reclamation would be accomplished for portions of the well pad not required for the continued operation of the well on this pad within six months of completion, weather permitting.
- c. The operator would control noxious weeds along access road use authorizations and well site by spraying or mechanical removal, according to the Utah Noxious Weed Act and as set forth in the approved surface damage agreements.
- d. Rat and mouse holes would be filled and compacted from bottom to top immediately upon release of the drilling rig from location. Upon well completion, any hydrocarbons in the pit shall be removed in accordance with 43 CFR 3162.7-1. The reserve pit would be allowed to dry prior to the commencement of backfilling work. No attempts would be made to backfill the reserve pit until it is free of standing water. Once dry, the liner would be torn and perforated before backfilling.
- e. The reserve pit and that portion of the location not needed for production facilities/operations would be recontoured to the approximate natural contours. Areas not used for production purposes would be backfilled and blended into the surrounding terrain, reseeded and erosion control measures installed. Mulching, erosion control measures and fertilization may be required to achieve acceptable stabilization. Back slopes and fore slopes would be reduced as practical and

scarified with the contour. The reserved topsoil would be evenly distributed over the slopes and scarified along the contour. Slopes would be seeded with the Ute Tribe specified seed mix.

f. Topsoil salvaged from the drill site and stored for more than one year would be placed at the location indicated on the well site layout drawing and graded to a depth optimum to maintain topsoil viability, seeded with the Ute Tribe prescribed seed mixture and covered with mulch for protection from wind and water erosion and to discourage the invasion of weeds.

### 11. <u>Surface and Mineral Ownership:</u>

- a. Surface ownership Ivie Cleade
- b. Mineral ownership Ute Indian Tribe 988 South 7500 East; Ft. Duchesne, Utah 84026; 435-725-4982.

#### 12. Other Information:

- a. Montgomery Archeological Consultants has conducted a Class III archeological survey. A copy of the report has been submitted under separate cover to the appropriate agencies by Montgomery as report 11-222 dated August 22, 2011 and report 11-155 dated July 20, 2011.
- b. BBC would require that their personnel, contractors, and subcontractors to comply with Federal regulations intended to protect archeological and cultural resources.
- c. Project personnel and contractors would be educated on and subject to the following requirements:
  - No dogs or firearms within the Project Area.
  - No littering within the Project Area.
  - Smoking within the Project Area would only be allowed in off-operator
    active locations or in specifically designated smoking areas. All cigarette
    butts would be placed in appropriate containers and not thrown on the
    ground or out windows of vehicles; personnel and contractors would abide
    by all fire restriction orders.
  - Campfires or uncontained fires of any kind would be prohibited.
  - Portable generators used in the Project Area would have spark arrestors.

Bill Barrett Corporation Surface Use Plan #16-12D-36 BTR Duchesne County, UT

### d. Disturbance estimates:

### **Approximate Acreage Disturbances**

Well Pad		3.313	acres
Access	683 feet	0.470	acres
Pipeline	249 feet	0.154	acres
Powerline	827 feet	2.761	acres

Total 6.698 acres

Bill Barrett Corporation Surface Use Plan #16-12D-36 BTR Duchesne County, UT

### OPERATOR CERTIFICATION

#### Certification:

I hereby certify that I, or someone under my direction supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein would be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application and that bond coverage is provided under Bill Barrett Corporations federal nationwide bond. These statements are subject to the provisions of 18 U.S.C. 1001 for the filings of false statements.

Executed this

Venessa Langmacher 2011

Name:

Senior Permit Analyst

Position Title:

1099 18th Street, Suite 2300, Denver, CO 80202

Address: Telephone:

303-312-8172

E-mail:

vlangmacher@billbarrettcorp.com

Field Representative

Kary Eldredge / Bill Barrett Corporation

Address:

1820 W. Highway 40, Roosevelt, UT 84066

Telephone:

435-725-3515 (office); 435-724-6789 (mobile)

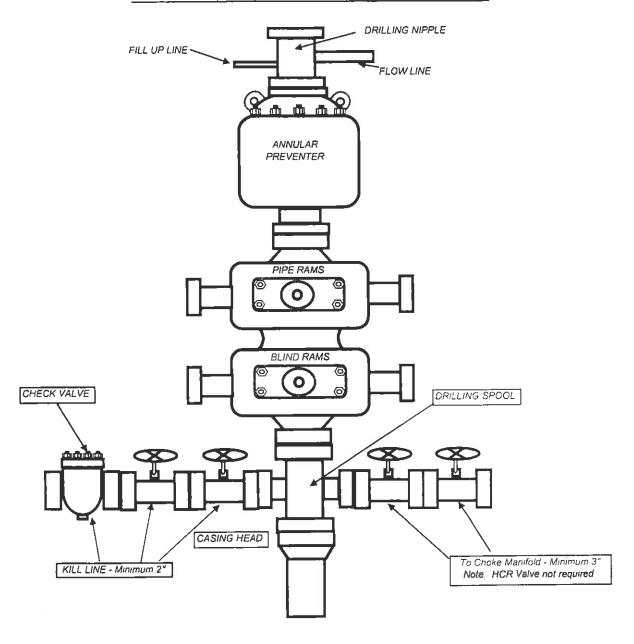
E-mail:

keldredge@billbarrettcorp.com

Venessa Langmacher, Senior Permit Analyst

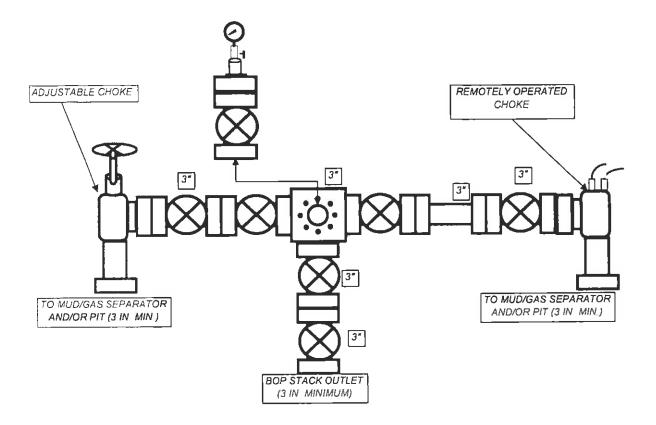
# **BILL BARRETT CORPORATION**

### TYPICAL 5,000 p.s.i. BLOWOUT PREVENTER



# **BILL BARRETT CORPORATION**

## TYPICAL 5,000 p.s.i. CHOKE MANIFOLD





September 19, 2011

Ms. Diana Mason – Petroleum Technician State of Utah Division of Oil, Gas and Mining 1594 West North Temple, Suite 1210 P. O. Box 145801 Salt Lake City, Utah 84114-5801

Re: Directional Drilling R649-3-11

Blacktail Ridge Area #16-12D-36 BTR Well

Surface: 825' FSL & 260' FEL, SESE, 12-T3S-R6W, USM Bottom Hole: 810' FSL & 810' FEL SESE, 12-T3S-R6W, USM

Duchesne County, Utah

Dear Ms. Mason,

Pursuant to the filing of Bill Barrett Corporation's ("BBC") Application for Permit to Drill the above referenced well, we hereby submit this letter in accordance with Oil & Gas Conservation Rules R649-2, R649-3, R649-10 and R649-11, pertaining to the Location and Siting of Wells.

- The proposed location is within our Blacktail Ridge Area.
- BBC is permitting this well as a directional well in order to minimize surface disturbance. By locating the well at the surface location and directionally drilling from this location, BBC will be able to utilize the existing road and pipelines in the area.
- The well will be drilled under an Exploration and Development Agreement between the Ute Indian Tribe and Ute Distribution Corporation. Ute Energy, LLC owns a right to participate in this well.
- BBC certifies that it is the working interest owner of all lands within 460 feet of the proposed well location, and together with Ute Energy, LLC, we own 100% of the working interest in these lands.

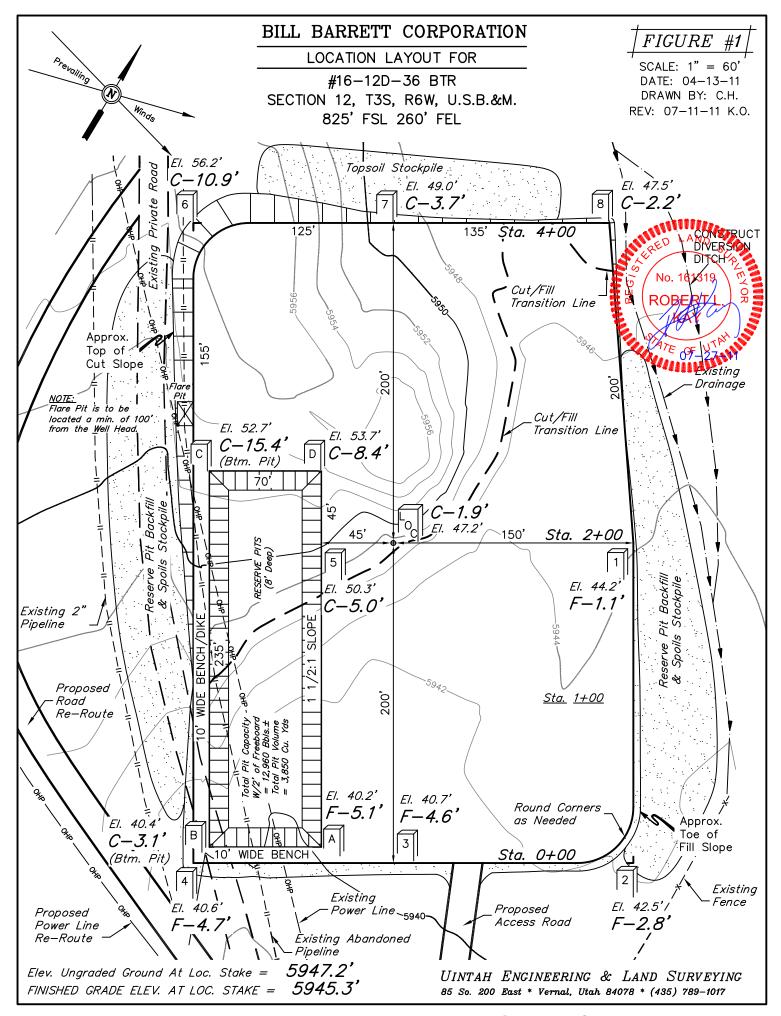
Based on the information provided, BBC requests that the permit be granted pursuant to R649-3-11. Should you have any questions or need further information, please contact me at 303-312-8544.

Sincerely,

Veneura Jangmackel David Watts for

Landman

1099 18<sup>TH</sup> STREET
SUITE 2300
DENVER, CO 80202
P 303.293.9100
F 303.291.0420



Remaining Location

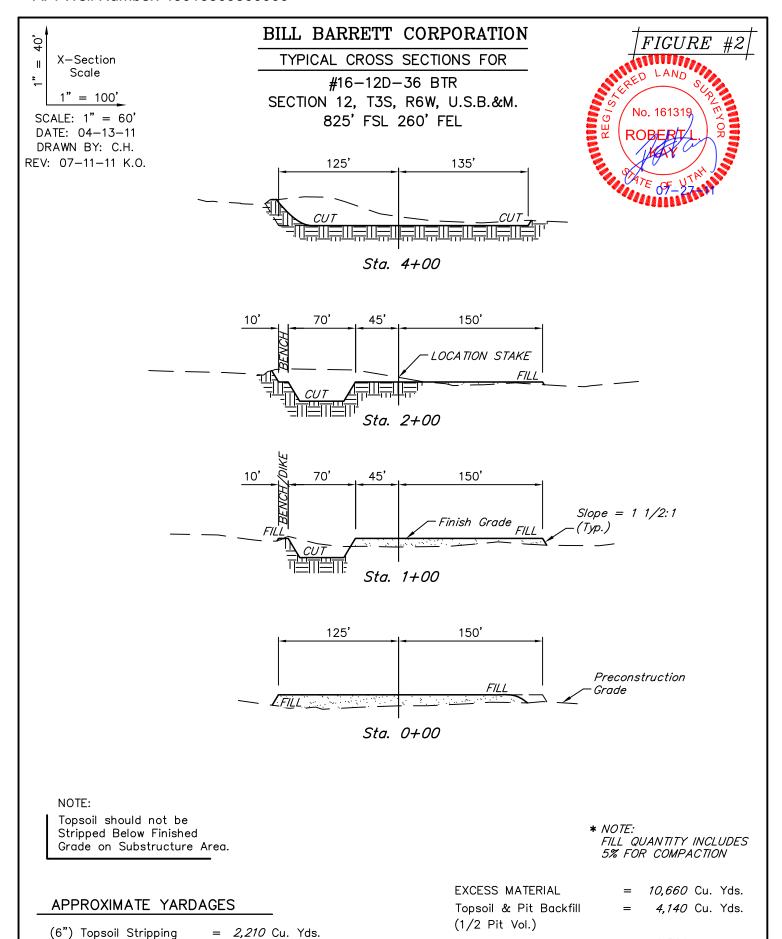
**FILL** 

TOTAL CUT

= 14,080 Cu. Yds.

16,290 CU.YDS.

5,630 CU.YDS.



# **RECEIVED:** September 19, 2011

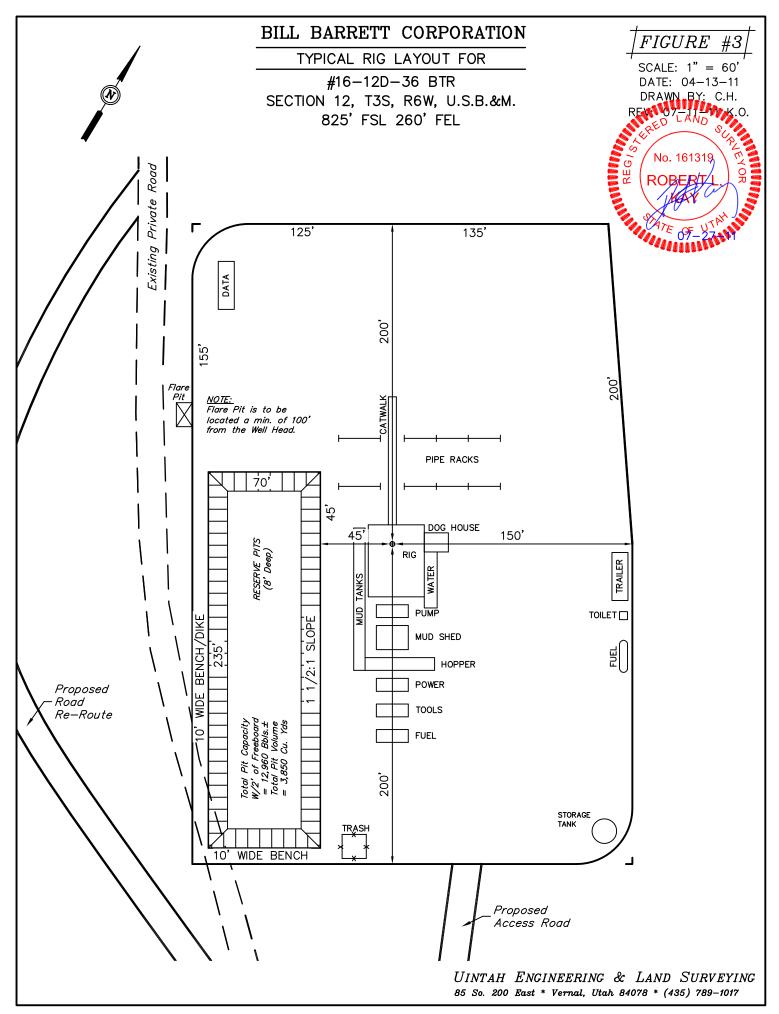
UINTAH ENGINEERING & LAND SURVEYING

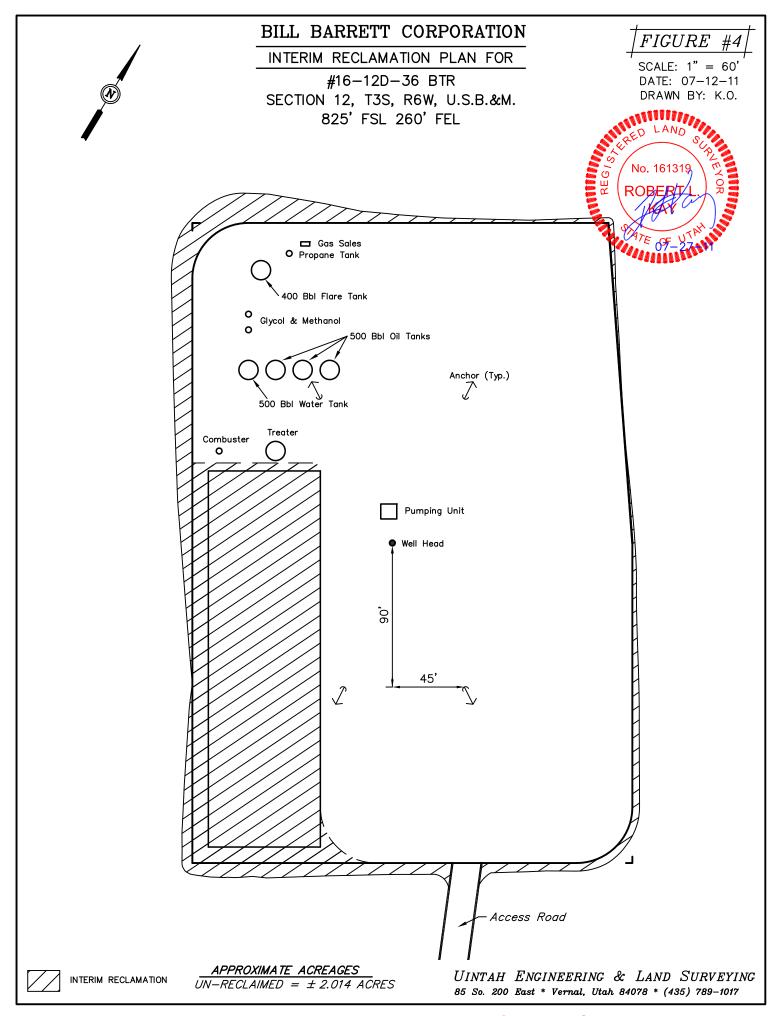
85 So. 200 East \* Vernal, Utah 84078 \* (435) 789-1017

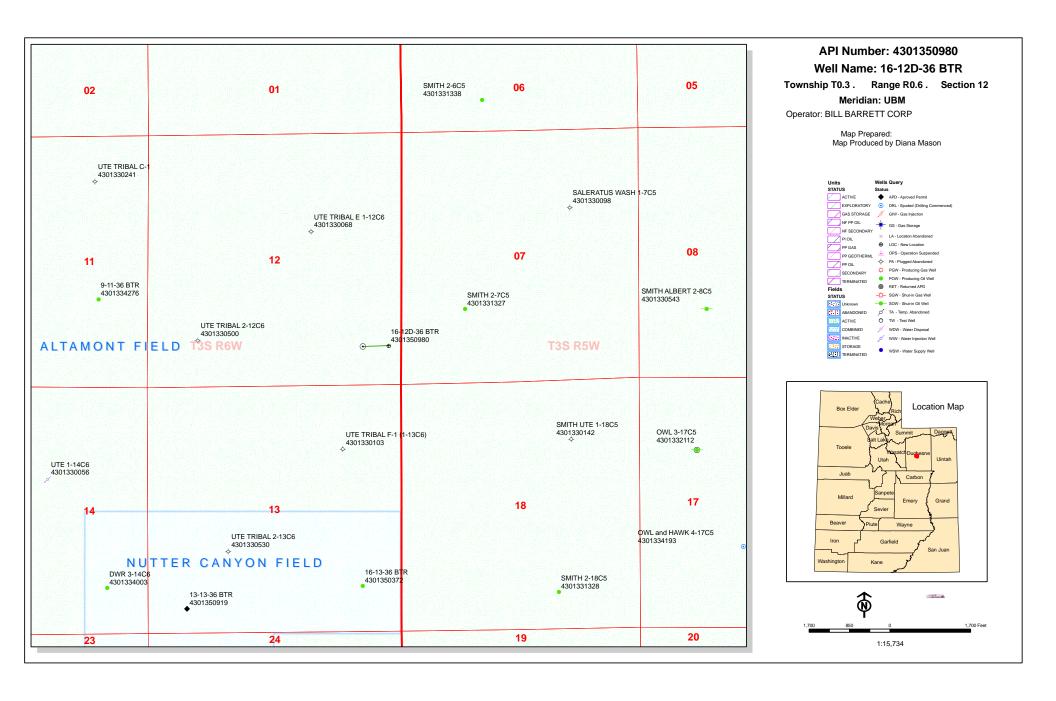
6,520 Cu. Yds.

EXCESS UNBALANCE

(After Interim Rehabilitation)







# **ON-SITE PREDRILL EVALUATION**

## Utah Division of Oil, Gas and Mining

**Operator** BILL BARRETT CORP

Well Name 16-12D-36 BTR

API Number 43013509800000 APD No 4665 Field/Unit ALTAMONT

**Location: 1/4,1/4** SESE **Sec** 12 **Tw** 3.0S **Rng** 6.0W 825 FSL 260 FEL

GPS Coord (UTM) 542352 4453153 Surface Owner Cleade and Deborah Ivie

## **Participants**

Jed Burton (neighbor, land owner representative), James Hereford (BLM), Kelly Jo Jackson (Archeologist), Roger Knight (BBC, dirt supervisor), Kary Eldredge (BBC), Trevor Anderson (UELS, surveyor), Don Hamilton (Starpoint, permit agent)

## Regional/Local Setting & Topography

This well is set on a small rocky knoll in middle of a large draw with a dry wash to the east. At times storm water is not contained to the wash but spreads out across the floor of the draw and over much of the east side of the proposed location. Drainage from this location is to the south through the wash to Starvation Reservoir approximately 2 miles south. Black Tail Mountain is approximately 2 miles to the north.

#### **Surface Use Plan**

#### **Current Surface Use**

Wildlfe Habitat

New Road Miles Well Pad Src Const Material Surface Formation

0.04 Width 265 Length 400 Onsite UNTA

Y

**Ancillary Facilities** N

Waste Management Plan Adequate?

## **Environmental Parameters**

#### Affected Floodplains and/or Wetlands Y

Storm water at times spreads over the east oside of location

#### Flora / Fauna

Deer, elk, coyote, rabbits and other small mammals, song birds, raptors Sage, prickly pear cactus, grasses, shadscale, rabbit brush

## Soil Type and Characteristics

Sandy loam soil

#### **Erosion Issues** Y

East side of location must hve rip rap to ensure storm flows stays in wash

## **Sedimentation Issues** N

## Site Stability Issues Y

Storm water must be kept from washing away east side of location

## **Drainage Diverson Required?** Y

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Berm Required? Y

**Erosion Sedimentation Control Required?** N

Paleo Survey Run? Y Paleo Potental Observed? N Cultural Survey Run? Y Cultural Resources? N

## **Reserve Pit**

Site-Specific Factors	Site R	anking	
Distance to Groundwater (feet)	>200	0	
Distance to Surface Water (feet)	100 to 200	15	
Dist. Nearest Municipal Well (ft)	>5280	0	
Distance to Other Wells (feet)	>1320	0	
Native Soil Type	Mod permeability	10	
Fluid Type	Fresh Water	5	
Drill Cuttings	Normal Rock	0	
<b>Annual Precipitation (inches)</b>	10 to 20	5	
Affected Populations			
<b>Presence Nearby Utility Conduits</b>	Not Present	0	
	Final Score	35	1 Sensitivity Level

## **Characteristics / Requirements**

The reserve pit will be placed in cut in a stable location. The pit will be 70ft x 235ft x 8ft deep with a total capacity including freeboard of 12,960bbl. Kary Eldredge of BBC said they will use a 16 mil liner with a felt sub-liner and this will be adequate for the site.

Closed Loop Mud Required? N Liner Required? Y Liner Thickness 16 Pit Underlayment Required? Y

## **Other Observations / Comments**

Richard Powell 9/7/2011 **Evaluator** Date / Time

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# **Application for Permit to Drill Statement of Basis**

**Utah Division of Oil, Gas and Mining** 

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APD No	API WellNo	Status	Well Type	Surf Owner CBM
4665	43013509800000	LOCKED	OW	P No
Operator	BILL BARRETT CORP		<b>Surface Owner-APD</b>	Cleade and Deborah Ivie
Well Name	16-12D-36 BTR		Unit	
Field	ALTAMONT		Type of Work	DRILL
Location	SESE 12 3S 6W U	825 FSL	260 FEL GPS Coord (UTM)	542367E 4453120N

## **Geologic Statement of Basis**

9/27/2011

The mineral rights for the proposed well are owned by the Ute Tribe. The BLM will be the agency responsible for evaluating and approving the drilling, casing and cement programs.

Brad Hill 9/27/2011
APD Evaluator Date / Time

#### **Surface Statement of Basis**

This onsite inspection was scheduled by James Hereford in cooperation with Bill Barrett Corporation. Land owner Ivie Cleade was invited but did not attend, but the land owner asked neighbor Jed Burton to attend in his place. Mr. Burtun stated that Mr. Cleade was satisfied with the location siting and that the location had been sited where it is at Mr. Cleades request.

Mr. Burton expressed that it is important to the land owner that there be a locked gate. However, Mr Kary Eldredge of BBC said that BBC would rather fence the entire location and access to avoid the need for a locked gate. This was acceptable to mr. Burton and the prefered method to allow the property to be secured.

According to land owner representative Jed Burton storm water backs up to the south of the location due to insufficient culvert capacity. It does not appear that this will affect the location but Kary Eldredge expressed that Bill Barrett would make necessary upgrades to that county road if it is determined they are needed.

There is a dry wash on the east side of the location which sometimes allows storm water to fan out across the draw and cover part of the proposed location. The wash must be fixed with rip rap or other means to keep storm water off the location. Roger Knight and Kary Eldredge agreed to this.

Richard Powell 9/7/2011
Onsite Evaluator Date / Time

#### Conditions of Approval / Application for Permit to Drill

Category	Condition
Pits	A synthetic liner with a minimum thickness of 16 mils with a felt subliner shall be properly installed and maintained in the reserve pit.
Surface	The well site shall be bermed to prevent fluids from leaving the pad.
Surface	Drainages adjacent to the proposed pad shall be diverted around the location, and the wash on the east side of the location must be stabalized with rock or other means to ensure storm water is not allowed to erode the east side of the location.
Surface	The reserve pit shall be fenced upon completion of drilling operations.

# WORKSHEET APPLICATION FOR PERMIT TO DRILL

**APD RECEIVED:** 9/19/2011 **API NO. ASSIGNED:** 43013509800000

WELL NAME: 16-12D-36 BTR

**OPERATOR:** BILL BARRETT CORP (N2165) **PHONE NUMBER:** 303 312-8172

**CONTACT:** Venessa Langmacher

PROPOSED LOCATION: SESE 12 030S 060W Permit Tech Review:

SURFACE: 0825 FSL 0260 FEL Engineering Review:

BOTTOM: 0810 FSL 0810 FEL Geology Review:

**COUNTY: DUCHESNE** 

LATITUDE: 40.22933 LONGITUDE: -110.50200 EASTINGS: 542367.00 NORTHINGS: 4453120.00

UTM SURF EASTINGS: 542367.00

FIELD NAME: ALTAMONT LEASE TYPE: 2 - Indian

**LEASE NUMBER:** 20G0005608 **PROPOSED PRODUCING FORMATION(S):** GREEN RIVER-WASATCH

SURFACE OWNER: 4 - Fee COALBED METHANE: NO

RECEIVED AND/OR REVIEWED: LOCATION AND SITING:

**▶ PLAT R649-2-3.** 

**Bond:** INDIAN - LPM8874725 **Unit:** 

Potash R649-3-2. General

Oil Shale 190-5

Oil Shale 190-3 R649-3-3. Exception

Oil Shale 190-13 Prilling Unit

**✓ Water Permit:** 43-180 **Board Cause No:** Cause 139-84

RDCC Review: Effective Date: 12/31/2008

Fee Surface Agreement Siting: 660' Fr Drl U Bdry & 1320' Fr Other Wells

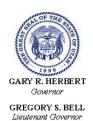
**Commingling Approved** 

**Comments:** Presite Completed

**Stipulations:** 4 - Federal Approval - dmason 5 - Statement of Basis - bhill

15 - Directional - dmason

API Well No: 43013509800000



# State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

## **Permit To Drill**

\*\*\*\*\*\*

Well Name: 16-12D-36 BTR
API Well Number: 43013509800000
Lease Number: 2OG0005608
Surface Owner: FEE (PRIVATE)

Approval Date: 9/27/2011

#### **Issued to:**

BILL BARRETT CORP, 1099 18th Street Ste 2300, Denver, CO 80202

## **Authority:**

Pursuant to Utah Code Ann. §40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 139-84. The expected producing formation or pool is the GREEN RIVER-WASATCH Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

#### **Duration:**

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

#### General:

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

## **Conditions of Approval:**

State approval of this well does not supercede the required federal approval, which must be obtained prior to drilling.

In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis (copy attached).

## **Notification Requirements:**

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

• Within 24 hours following the spudding of the well – contact Carol Daniels at 801-538-5284 (please leave a voicemail message if not available)
OR

submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website at http://oilgas.ogm.utah.gov

API Well No: 43013509800000

## **Reporting Requirements:**

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) due within 5 days of spudding the well
- Monthly Status Report (Form 9) due by 5th day of the following calendar month
- Requests to Change Plans (Form 9) due prior to implementation
- Written Notice of Emergency Changes (Form 9) due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) due prior to implementation
- Report of Water Encountered (Form 7) due within 30 days after completion
- Well Completion Report (Form 8) due within 30 days after completion or plugging

**Approved By:** 

For John Rogers Associate Director, Oil & Gas

MECEIVEL

SEP 2 0 2011

FORM APPROVED OMB No. 1004-0136 Expires July 31, 2010

5. Lease Serial No. 20G0005608

6. If Indian, Allottee or Tribe Name

#### **UNITED STATES** DEPARTMENT OF THE INTERIOR **BUREAU OF LAND MANAGEMENT**

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: DRILL REENTER		7. If Unit or CA Agreement, Name and No.
1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Oth		
	VENESSA LANGMACHER scher@billbarrettcorp.com	9. API Well No.
3a. Address 1099 18TH STREET SUITE 2300 DENVER, CO 80202	3b. Phone No. (include area code) Ph: 303-312-8172 Fx: 303-291-0420	10. Field and Pool, or Exploratory ALTAMONT 43.013.50980
4. Location of Well (Report location clearly and in accorded	ance with any State requirements.*)	11. Sec., T., R., M., or Blk. and Survey or Area
At surface SESE 825FSL 260FEL 40.	229572 N Lat, 110.502939 W Lon	Sec 12 T3S R6W Mer UBM
At proposed prod. zone SESE 810FSL 810FEL 40.	229483 N Lat, 110.504906 W Lon	
14. Distance in miles and direction from nearest town or post 11.3 MILES NORTHWEST OF DUCHESNE, UT	office*	12. County or Parish DUCHESNE 13. State
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No. of Acres in Lease	17. Spacing Unit dedicated to this well
810' (BOTTOM HOLE)	66101.00	640.00
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. on file
2325	11155 MD 11112 TVD	LPM8874725
21. Elevations (Show whether DF, KB, RT, GL, etc. 5947 GL	22. Approximate date work will start 01/01/2012	23. Estimated duration 60 DAYS (D&C)
	24. Attachments	
The following, completed in accordance with the requirements of	of Onshore Oil and Gas Order No. 1, shall be attached	to this form:
<ol> <li>Well plat certified by a registered surveyor.</li> <li>A Drilling Plan.</li> <li>A Surface Use Plan (if the location is on National Forest Syst SUPO shall be filed with the appropriate Forest Service Of</li> </ol>	4. Bond to cover the opera Item 20 above). 5. Operator certification	tions unless covered by an existing bond on file (see information and/or plans as may be required by the
25. Signature (Electronic Submission)	Name (Printed/Typed) VENESSA LANGMACHER Ph: 303-3	12-8172 Date 09/19/2011
Title SENIOR PERMIT ANALYST	the second se	· · · · · · · · · · · · · · · · · · ·
Approved by (Signature)	Name (Printed/Typed) Jerry Kenczk	a FEB 3 2012
Title Assistant Field Manager Lands & Mineral Resources	VERNAL FIELD OFFIC	E
Application approval does not warrant or certify the applicant hoperations thereon.  Conditions of approval, if any, are attached.	olds legal or equitable title to those rights in the subject	t lease which would entitle the applicant to conduct
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, 1 States any false, fictitious or fraudulent statements or representations.	make it a crime for any person knowingly and willfull tions as to any matter within its jurisdiction.	y to make to any department or agency of the United
Additional Operator Remarks (see next page)	The state of the s	
Electronic Submissi	on #117880 verified by the BLM Well Info	rmation System DECENTER
For BILL Committed to AFMS	BARRETT CORPORATION, sent to the V S for processing by LESLIE ROBINSON	rmation System ernal on 09/23/2011 ()

**NOTICE OF APPROVAL** 

FEB 2 8 2012 DIV. OF OIL, GAS & MINING

\*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\*

1165M99A9

**CONDITIONS OF APPROVAL ATTACHED** 



## UNITED STATES DEPARTMENT OF THE INTERIOR **BUREAU OF LAND MANAGEMENT VERNAL FIELD OFFICE** 170 South 500 East

**VERNAL, UT 84078** 

(435) 781-4400



# CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL

Company:

**Bill Barrett Corporation** 

Well No: API No:

16-12D-36 BTR 43-013-50980

Location:

**SESE, Sec.12, T3S R6W** 

Lease No:

20G0005608

Agreement:

N/A

**OFFICE NUMBER:** 

(435) 781-4400

OFFICE FAX NUMBER:

(435) 781-3420

## A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR FIELD REPRESENTATIVE TO INSURE COMPLIANCE

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.

## **NOTIFICATION REQUIREMENTS**

Construction Activity (Notify Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist)	_	The Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist shall be notified at least 48 hours in advance of any construction activity. The Ute Tribal office is open Monday through Thursday.
Construction Completion (Notify Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist)	-	Upon completion of the pertinent APD/ROW construction, notify the Ute Tribe Energy & Minerals Dept. for a Tribal Technician to verify the Affidavit of Completion. Notify the BLM Environmental Scientist prior to moving on the drilling rig.
Spud Notice (Notify BLM Petroleum Engineer)	-	Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify BLM Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to running casing and cementing all casing strings to: <a href="mailto:blm.ut_vn_opreport@blm.gov">blm_ut_vn_opreport@blm.gov</a>
BOP & Related Equipment Tests (Notify BLM Supv. Petroleum Tech.)		Twenty-Four (24) hours prior to initiating pressure tests.
First Production Notice (Notify BLM Petroleum Engineer)	-	Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.

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2/9/2012

## SURFACE USE PROGRAM CONDITIONS OF APPROVAL (COAs)

## **CONDITIONS OF APPROVAL:**

- Any deviation of submitted APD's, which includes BBCs surface use plan, and ROW
  applications the operator will notify the BLM in writing and will receive written authorization of
  any such change with appropriate authorization.
- The operator will implement "Safety and Emergency Plan." The operator's safety director will ensure its compliance.
- All operator employees and/or authorized personnel (sub-contractors) in the field will have approved applicable APD's, COAs, and ROW permits/authorizations on their person(s) during all phases of construction.
- All vehicular traffic, personnel movement, construction/restoration operations should be confined to the area examined and approved, and to the existing roadways and/or evaluated access routes.
- Production facilities will be painted Beetle Green to blend in with the surrounding habitat.
- Wood that will be removed will be piled up along well access road, and around well pad. This can be used by the land owner, or for reclamation purposes.
- The reserve pit will be lined with a 20 mil liner to help prevent any leaks from occurring.
- Production equipment will be placed towards the front of the pad to maximize interim reclamation efforts
- Dust control on road areas to comply with surface owners directions.
- Corner #8 of the proposed well pad will be rounded and armored with rock.
- Gate will be constructed at the existing fence as indicated on well plats.
- Culverts at main county road as indicated on the onsite will have to be maintained and improved to control seasonal runoff concerns.
- Site reclamation would be accomplished for portions of the well pad not needed for production, within 6 months of completion, weather permitting. This also includes any roads, and pipeline areas that have been disturbed as well. Roads and pipeline disturbances can undergo reclamation immediately after the pipeline is installed and after the roads are built. Please contact surface owner or the BLM for possible seed mixes to use in the project area. Non-natives can be used; however lbs/ac must be kept low to minimize the chance of a monoculture.

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2/9/2012

## DOWNHOLE PROGRAM CONDITIONS OF APPROVAL (COAs)

## SITE SPECIFIC DOWNHOLE COAs:

• Production casing cement shall be brought up and into the surface casing. The minimum cement top is 400 ft above the surface casing shoe.

All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to. The following items are emphasized:

## DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a test pump with a chart recorder and <u>NOT</u> by the rig pumps. Test shall be reported in the driller's log.
- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- Cement baskets shall not be run on surface casing.
- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water
  is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM
  Vernal Field Office.
- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person

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2/9/2012

making the report (along with a telephone number) should the BLM need to obtain additional information.

- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the <u>top of cement</u> and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- Please submit an electronic copy of all other logs run on this well in LAS format to BLM\_UT\_VN\_Welllogs@BLM.gov. This submission will supersede the requirement for submittal of paper logs to the BLM.
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

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## **OPERATING REQUIREMENT REMINDERS:**

 All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.

- For information regarding production reporting, contact the Office of Natural Resources Revenue (ONRR) at <a href="https://www.ONRR.gov">www.ONRR.gov</a>.
- In accordance with 43 CFR 3162.4-3, this well shall be reported on the "Monthly Report of Operations" (Oil and Gas Operations Report ((OGOR)) starting with the month in which operations commence and continue each month until the well is physically plugged and abandoned. This report shall be filed in duplicate, directly with the Minerals Management Service, P.O. Box 17110, Denver, Colorado 80217-0110, or call 1-800-525-7922 (303) 231-3650 for reporting information.
- Should the well be successfully completed for production, the BLM Vernal Field office must be
  notified when it is placed in a producing status. Such notification will be by written
  communication and must be received in this office by not later than the fifth business day
  following the date on which the well is placed on production. The notification shall provide, as a
  minimum, the following informational items:
  - o Operator name, address, and telephone number.
  - Well name and number.
  - Well location (¼¼, Sec., Twn, Rng, and P.M.).
  - Date well was placed in a producing status (date of first production for which royalty will be paid).
  - The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
  - The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
  - o Unit agreement and/or participating area name and number, if applicable.
  - o Communitization agreement number, if applicable.
- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.
- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.
- Whether the well is completed as a dry hole or as a producer, "Well Completion and

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Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.
- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field
  Office Petroleum Engineers will be provided with a date and time for the initial meter calibration
  and all future meter proving schedules. A copy of the meter calibration reports shall be
  submitted to the BLM Vernal Field Office. All measurement facilities will conform to the API
  standards for liquid hydrocarbons and the AGA standards for natural gas measurement. All
  measurement points shall be identified as the point of sale or allocation for royalty purposes.
- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted
  to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs
  first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be
  adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively
  sealed in accordance with Onshore Oil & Gas Order No. 3.
- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be obtained orally, but such approval does not waive the written report requirement.
- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover
  equipment shall be removed from a well to be placed in a suspended status without prior
  approval of the BLM Vernal Field Office. If operations are to be suspended for more than 30
  days, prior approval of the BLM Vernal Field Office shall be obtained and notification given
  before resumption of operations.
- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.
- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent

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Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.

Sundry Number: 29047 API Well Number: 43013509800000

	STATE OF UTAH		FORM 9
ı	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	G	5.LEASE DESIGNATION AND SERIAL NUMBER: 20G0005608
SUNDR	Y NOTICES AND REPORTS ON	WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	posals to drill new wells, significantly dee reenter plugged wells, or to drill horizontal n for such proposals.		7.UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Oil Well			8. WELL NAME and NUMBER: 16-12D-36 BTR
2. NAME OF OPERATOR: BILL BARRETT CORP			9. API NUMBER: 43013509800000
3. ADDRESS OF OPERATOR: 1099 18th Street Ste 2300		ONE NUMBER: 312-8164 Ext	9. FIELD and POOL or WILDCAT: ALTAMONT
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0825 FSL 0260 FEL			COUNTY: DUCHESNE
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: SESE Section: 1:	<ul><li>HP, RANGE, MERIDIAN:</li><li>Township: 03.0S Range: 06.0W Meridian:</li></ul>	υ	STATE: UTAH
11. CHECI	K APPROPRIATE BOXES TO INDICATE N	NATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
✓ NOTICE OF INTENT	ACIDIZE	ALTER CASING	CASING REPAIR
Approximate date work will start: 6/1/2013	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
0,1,2010	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
 	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
SPUD REPORT  Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
DRILLING REPORT	WATER SHUTOFF	SI TA STATUS EXTENSION	✓ APD EXTENSION
Report Date:	WILDCAT WELL DETERMINATION	OTHER	OTHER:
12 DESCRIBE PROPOSED OR	COMPLETED OPERATIONS. Clearly show all p	ertinent details including dates, d	lenths volumes etc
	sts a one year extension for the		Approved by the
· ·	,	•	Utah Division of Oil, Gas and Mining
			A
			Date: August 28, 2012
			By: Dally Chill
NAME (PLEASE PRINT)	PHONE NUMBER	TITLE	
Venessa Langmacher	303 312-8172	Senior Permit Analyst	
SIGNATURE N/A		<b>DATE</b> 8/16/2012	

Sundry Number: 29047 API Well Number: 43013509800000



## The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

**Electronic Permitting System - Sundry Notices** 

## Request for Permit Extension Validation Well Number 43013509800000

API: 43013509800000 Well Name: 16-12D-36 BTR

Location: 0825 FSL 0260 FEL QTR SESE SEC 12 TWNP 030S RNG 060W MER U

Company Permit Issued to: BILL BARRETT CORP

Date Original Permit Issued: 9/27/2011

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

• If located on private land, has the ownership changed, if so, has the surface agreement been updated?  Yes  No
<ul> <li>Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location?</li> <li>Yes</li> <li>No</li> </ul>
• Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well?  Yes No
• Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location?  Yes No
• Has the approved source of water for drilling changed?   Yes  No
<ul> <li>Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation?</li> <li>Yes</li> <li>No</li> </ul>
• Is bonding still in place, which covers this proposed well?   Yes   No
nature: Venessa Langmacher Date: 8/16/2012

Sig

Title: Senior Permit Analyst Representing: BILL BARRETT CORP

	STATE OF UTAH				FORM 9
ı	DEPARTMENT OF NATURAL RESOUR DIVISION OF OIL, GAS, AND MI		3	<b>5.LEASE DE</b> 20G0005	SIGNATION AND SERIAL NUMBER: 608
SUNDR	Y NOTICES AND REPORTS	ON	WELLS	6. IF INDIAN	I, ALLOTTEE OR TRIBE NAME:
Do not use this form for pro current bottom-hole depth, I FOR PERMIT TO DRILL form	posals to drill new wells, significantly reenter plugged wells, or to drill horiz n for such proposals.	y deep ontal l	en existing wells below aterals. Use APPLICATION	7.UNIT or C	A AGREEMENT NAME:
1. TYPE OF WELL Oil Well				8. WELL NA 16-12D-3	ME and NUMBER: 6 BTR
2. NAME OF OPERATOR: BILL BARRETT CORP				9. API NUME 4301350	
3. ADDRESS OF OPERATOR: 1099 18th Street Ste 2300	, Denver, CO, 80202		NE NUMBER: 312-8164 Ext	9. FIELD an ALTAMON	d POOL or WILDCAT: \T
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0825 FSL 0260 FEL				COUNTY: DUCHESN	E
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: SESE Section: 1:	<b>IIP, RANGE, MERIDIAN:</b> 2 Township: 03.0S Range: 06.0W Mer	idian: \	υ	STATE: UTAH	
11. CHECI	K APPROPRIATE BOXES TO INDICA	ATE N	ATURE OF NOTICE, REPOR	T, OR OTH	IER DATA
TYPE OF SUBMISSION			TYPE OF ACTION		
	ACIDIZE		ALTER CASING	☐ CA	SING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS		CHANGE TUBING	∟ сн	ANGE WELL NAME
SUBSEQUENT REPORT	CHANGE WELL STATUS		COMMINGLE PRODUCING FORMATIONS	☐ co	NVERT WELL TYPE
Date of Work Completion:	DEEPEN	☐ F	RACTURE TREAT	□ NE	W CONSTRUCTION
	OPERATOR CHANGE	☐ F	PLUG AND ABANDON	PL	UG BACK
✓ SPUD REPORT	PRODUCTION START OR RESUME	F	RECLAMATION OF WELL SITE	☐ RE	COMPLETE DIFFERENT FORMATION
Date of Spud: 9/28/2012	REPERFORATE CURRENT FORMATION		SIDETRACK TO REPAIR WELL	□ те	MPORARY ABANDON
	TUBING REPAIR	□ v	/ENT OR FLARE	□ w	ATER DISPOSAL
DRILLING REPORT Report Date:	WATER SHUTOFF		SI TA STATUS EXTENSION	□ ар	D EXTENSION
	WILDCAT WELL DETERMINATION		OTHER	OTHER:	
This well was sp	COMPLETED OPERATIONS. Clearly show ud on 9/28/2012 at 9:30 ar	n by	Triple A Drilling.	epths, volun Ac Ut Oil, FOR	nes, etc.  cepted by the ah Division of Gas and Mining RECORD ONLY tober 02, 2012
NAME (PLEASE PRINT) Venessa Langmacher	<b>PHONE NUM</b> 303 312-8172	BER	TITLE Senior Permit Analyst		
SIGNATURE N/A			<b>DATE</b> 10/2/2012		

SUBMIT AS EMAIL Print Form

# **BLM - Vernal Field Office - Notification Form**

Submitted By Venessa Langmach Phone Number 303-Well Name/Number 16-12D-36 BTR	
Qtr/Qtr <u>SE SE</u> Section <u>12</u> Township <u>3S</u> Release Serial Number <u>20G0005608</u>	ange <u>6W</u>
API Number <u>4301350980</u>	
<u>Spud Notice</u> – Spud is the initial spudding of the wel out below a casing string.	l, not drilling
Date/Time <u>9/28/2012</u> 8:00 AM ✓	РМ
Casing — Please report time casing run starts, not ce times.  Surface Casing Intermediate Casing Production Casing Liner Other	ementing
Date/Time AM [	РМ
BOPE Initial BOPE test at surface casing point BOPE test at intermediate casing point 30 day BOPE test Other	RECEIVED SEP 2 7 2012 DIV. OF OIL, GAS & MINING
Date/Time AM	РМ
Remarks	

Sundry Number: 30504 API Well Number: 43013509800000

	STATE OF UTAH			FORM 9
ı	DEPARTMENT OF NATURAL RESOU DIVISION OF OIL, GAS, AND N		3	5.LEASE DESIGNATION AND SERIAL NUMBER: 20G0005608
SUNDR	Y NOTICES AND REPORT	S ON	WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	posals to drill new wells, significant reenter plugged wells, or to drill hori n for such proposals.			7.UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Oil Well				8. WELL NAME and NUMBER: 16-12D-36 BTR
2. NAME OF OPERATOR: BILL BARRETT CORP				<b>9. API NUMBER:</b> 43013509800000
3. ADDRESS OF OPERATOR: 1099 18th Street Ste 2300	, Denver, CO, 80202		NE NUMBER: 312-8164 Ext	9. FIELD and POOL or WILDCAT: ALTAMONT
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0825 FSL 0260 FEL				COUNTY: DUCHESNE
QTR/QTR, SECTION, TOWNSH	tip, range, meridian: 2 Township: 03.0S Range: 06.0W Me	eridian:	υ	STATE: UTAH
11. CHECI	K APPROPRIATE BOXES TO INDIC	CATE N	ATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION			TYPE OF ACTION	
	ACIDIZE		ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS		CHANGE TUBING	CHANGE WELL NAME
	CHANGE WELL STATUS		COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN		FRACTURE TREAT	☐ NEW CONSTRUCTION
·	OPERATOR CHANGE		PLUG AND ABANDON	PLUG BACK
SPUD REPORT	PRODUCTION START OR RESUME		RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION		SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
✓ DRILLING REPORT	L TUBING REPAIR		/ENT OR FLARE	☐ WATER DISPOSAL
Report Date: 9/30/2012	WATER SHUTOFF	□ :	SI TA STATUS EXTENSION	APD EXTENSION
0,00,20.2	WILDCAT WELL DETERMINATION	□ (	OTHER	OTHER:
Well spud 9/28/2	completed operations. Clearly sho 2012; no other September activity to report.			Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY October 05, 2012
NAME (PLEASE PRINT) Megan Finnegan	<b>PHONE NUI</b> 303 299-9949	MBER	TITLE Permit Analyst	
SIGNATURE			DATE	
N/A			10/2/2012	

# TO35 ROGW 5-12

From:

pat506 <pat506@billbarrettcorp.com>

To:

"caroldaniels@utah.gov" <caroldaniels@utah.gov>, "dennisingram@utah.gov"...

CC:

Tracey Fallang <ffallang@billbarrettcorp.com>, Venessa Langmacher <vlang...

Date:

10/16/2012 9:40 PM

Subject:

PATT 506 24 HR NOTICE...

## GOOD EVENING;

THIS IS A 24 HR TO A ROUGH 30HR NOTICE FOR SURFACE CSG. RUN & CEMENT JOB. ALSO A ROUGH 36 HR TO 40 HR. NOTICE FOR NIPPLE UP AND PSI TESTING OF BOP'S ON THE 16-12D-36 BTR, API#43-013-50980...

IF THERE ARE ANY QUESTIONS, COMMENTS, AND/OR CONCERNS CONTACT 435-828-6095 OR 970-361-3264...

BILL BARRETT CORP. PATTERSON 506 435-828-6095 970-361-3264

RECEIVED
OCT 17 2012

DIV. OF OIL, GAS & MINING

## STATE OF UTAH **DEPARTMENT OF NATURAL RESOURCES** DIVISION OF OIL, GAS AND MINING

ENTITY	ACTION	FORM

Operator:

**Bill Barrett Corporation** 

Operator Account Number: N 2165

Address:

1099 18th Street, Suite 2300

city Denver

zip 80202 state CO

Phone Number: (303) 312-8172

#### Well 1

Weil	Name	QQ	Sec	Twp	Rng	County
16-12D-36 BTR		SESE	12	38	6W	Duchesne
Current Entity Number	New Entity Number	s	pud Da	le		tity Assignment Effective Date
Deu	18748	9	/28/201	2	1018	2413013
	16-12D-36 BTR  Current Entity  Number	Current Entity New Entity Number Number	16-12D-36 BTR SESE  Current Entity New Entity S Number Number	16-12D-36 BTR SESE 12  Current Entity New Entity Spud Date Number Number	16-12D-36 BTR SESE 12 3S  Current Entity New Entity Spud Date Number Number	16-12D-36 BTR SESE 12 3S 6W  Current Entity New Entity Spud Date Entity Number Substitution Security S

GR.WS BHL: SESE

API Number	Well	ପଦ	Sec	Twp	Rng	County			
Action Code	Current Entity New Entity Number Number			Spud Date			Entity Assignment Effective Date		
· :									

#### Well 3

API Number	Well I	QQ	Sec	Twp	Rng	County	
Action Code	Current Entity Number	New Entity Number		pud Da			ity Assignment Effective Date
Comments:							

#### **ACTION CODES:**

- A Establish new entity for new well (single well only)
- B Add new well to existing entity (group or unit well)
- C Re-assign well from one existing entity to another existing entity

  D Re-assign well from one existing entity
- E Other (Explain in 'comments' section)

OCT 13 2012

Venessa Langmacher	
Name (Please Print)	
Venessa Langmacher	
Signature	
Sr Permit Analyst	10/2/2012
Title	Date

# TO35 ROBW 5 12 4301350980

From:

pat506 <pat506@billbarrettcorp.com>

To:

pat506 <pat506@billbarrettcorp.com>, "caroldaniels@utah.gov" <caroldanie... Tracey Fallang <tfallang@billbarrettcorp.com>, Venessa Langmacher <vlang...

CC: Date:

10/21/2012 5:47 AM

Subject:

RE: PATT 506 24 HR NOTICE

**Good Morning** 

Ran into some lost circ problems should be running surface casing late tonight10/21/12

thank you Monte Long

**BBC** 

Patterson 506

From: pat506

Sent: Tuesday, October 16, 2012 9:40 PM

To: caroldaniels@utah.gov; dennisingram@utah.gov; richardpowell@utah.gov; ut\_vn\_opreport@blm.gov

Cc: Tracey Fallang; Venessa Langmacher

Subject: PATT 506 24 HR NOTICE...

## GOOD EVENING;

THIS IS A 24 HR TO A ROUGH 30HR NOTICE FOR SURFACE CSG. RUN & CEMENT JOB. ALSO A ROUGH 36 HR TO 40 HR. NOTICE FOR NIPPLE UP AND PSI TESTING OF BOP'S ON THE 16-12D-36 BTR, API#43-013-50980...

IF THERE ARE ANY QUESTIONS, COMMENTS, AND/OR CONCERNS CONTACT 435-828-6095 OR 970-361-3264...

BILL BARRETT CORP. PATTERSON 506 435-828-6095 970-361-3264

RECEIVED OCT 2 3 2012

DIV. OF OIL, GAS & MINING

	STATE OF UTAH		FORM 9			
ı	DEPARTMENT OF NATURAL RESOURCE DIVISION OF OIL, GAS, AND MIN			<b>5.LEASE</b> 20G00	<b>DESIGNATION AND SERIAL NUMBER:</b> 05608	
SUNDR	Y NOTICES AND REPORTS	ON \	WELLS	6. IF IND	IAN, ALLOTTEE OR TRIBE NAME:	
	posals to drill new wells, significantly reenter plugged wells, or to drill horizon for such proposals.			7.UNIT or CA AGREEMENT NAME:		
1. TYPE OF WELL Oil Well			1	NAME and NUMBER: 0-36 BTR		
2. NAME OF OPERATOR: BILL BARRETT CORP				<b>9. API NU</b> 43013	JMBER: 509800000	
3. ADDRESS OF OPERATOR: 1099 18th Street Ste 2300	, Denver, CO, 80202		NE NUMBER: 12-8164 Ext	9. FIELD ALTAM	and POOL or WILDCAT: ONT	
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0825 FSL 0260 FEL				COUNTY DUCHE		
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: SESE Section: 1:	HP, RANGE, MERIDIAN: 2 Township: 03.0S Range: 06.0W Merio	J	STATE: UTAH			
11. CHECI	K APPROPRIATE BOXES TO INDICA	TE NA	ATURE OF NOTICE, REPOR	T, OR O	THER DATA	
TYPE OF SUBMISSION			TYPE OF ACTION			
_	ACIDIZE	Па	LTER CASING		CASING REPAIR	
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	☐ cı	HANGE TUBING		CHANGE WELL NAME	
	CHANGE WELL STATUS	☐ c	OMMINGLE PRODUCING FORMATIONS		CONVERT WELL TYPE	
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	☐ FF	RACTURE TREAT		NEW CONSTRUCTION	
	OPERATOR CHANGE	PI	LUG AND ABANDON		PLUG BACK	
SPUD REPORT	PRODUCTION START OR RESUME	RI	ECLAMATION OF WELL SITE		RECOMPLETE DIFFERENT FORMATION	
Date of Spud:	REPERFORATE CURRENT FORMATION	☐ sı	IDETRACK TO REPAIR WELL		TEMPORARY ABANDON	
	TUBING REPAIR	U ve	ENT OR FLARE		WATER DISPOSAL	
✓ DRILLING REPORT Report Date:	WATER SHUTOFF	☐ sı	I TA STATUS EXTENSION		APD EXTENSION	
10/31/2012	WILDCAT WELL DETERMINATION	□ o <sup>.</sup>	THER	отне	R:	
	COMPLETED OPERATIONS. Clearly show 2 monthly drilling activity re			FOI	Accepted by the Utah Division of I, Gas and Mining R RECORD ONLY November 07, 2012	
NAME (PLEASE PRINT) Brady Riley	<b>PHONE NUME</b> 303 312-8115	BER	TITLE Permit Analyst			
SIGNATURE N/A		$\neg$	<b>DATE</b> 11/7/2012			



PI/UWI			State/Provinc	1 '	Field Name	Well Status	Total Depth (ftKB) Primary Job Type
	09800000	l	Utah	Duchesne	Black Tail R	idge DRILLING	9,408.0 Drilling & Completion
ime Lo		End Time	Code	Catagon			Com
2:00		21:00	1	Category RIGUP & TEARDOWN	RIC	GING DOWN WITH CREV	
1:00		06:00	21	OPEN		IT ON DAYLIGHT	
	2D-36 BT			012 06:00 - 10/			
PI/UWI	ום ספ-עצ		State/Province		Field Name	Well Status	Total Depth (ftKB) Primary Job Type
	09800000		Utah	Duchesne	Black Tail R		9,408.0 Drilling & Completion
ime Lo							
tart Time 6:00		End Time 07:00	Code 21	OPEN	10//	IT ON DAYLIGHT	Com
7:00		19:00	1	RIGUP & TEARDOWN		VING RIG WITH TRUCK'S	
9:00	1	06:00	21	OPEN TEARBOWN		IT ON TRUCK'S	····
				1			
16-12	2D-36 BT		J/12/20 State/Province	012 06:00 - 10/	13/2012 06   Field Name	IWell Status	Total Dooth (#I/D)   Drimon, Joh Type
	09800000		State/Provinc Utah	County Duchesne	Black Tail R		Total Depth (ftKB) Primary Job Type 9,408.0 Drilling & Completion
ime Lo				I	l	<u> </u>	, , ,
tart Time	- ( )	End Time		Category	,	IT ON DAY(LOUT	Com
6:00		07:00	21	OPEN TEADDOWN		AIT ON DAYLIGHT	LWEST BOOTBUOKNO
7:00	11.00		1	RIGUP & TEARDOWN	_	VE RIG AND RIG UP WITH	H WEST ROC TRUCKING
8:00	12.00		1	RIGUP & TEARDOWN		G UP WITH CREW'S	
_	2D-36 BT			012 06:00 - 10/°			
PI/UWI	09800000		State/Provinc Utah	County Duchesne	Field Name Black Tail R	Well Status idge DRILLING	Total Depth (ftKB) Primary Job Type 9,408.0 Drilling & Completion
ime Lo			Ulan	Ducheshe	DIACK TAILK	lage  DRILLING	9,406.0 Drilling & Completion
tart Time		End Time	Code	Category			Com
6:00	4.50	10:30	21	OPEN	FIN	IISH RIGGING UP, PRE SF	PUD RIG INSP., AND WAITING ON NEW REAMERS
0.00	0.50	44.00	100	DIDECTIONAL MODIC		LAND ODIENTATE DIDEO	TIONAL TOOLIO
0:30		14:00	20	DIRECTIONAL WORK		AND ORIENTATE DIREC	HONAL TOOL'S
14:00	16.00	06:00	2	DRILL ACTUAL		G UP @ 99' 'WT= 10K	
						M= 35	
					SP	M= 140	
	1		7/14/20	10.00.00 10/	. <b></b>	-00	
16-12	D-36 BT	'R 10	<i>)  </i>	)12 06:00 - 10/	15/2012 06	.00	
PI/UWI			State/Province	1 '	Field Name	Well Status	Total Depth (ftKB) Primary Job Type
PI/UWI 301350	09800000					Well Status	Total Depth (ftKB) Primary Job Type 9,408.0 Drilling & Completion
PI/UWI 301350 ime Lo	09800000 <b>Pg</b>		State/Province Utah	County Duchesne	Field Name	Well Status	9,408.0 Drilling & Completion
PI/UWI 301350 ime Lo	09800000 <b>Dg</b> Dur (hr)		State/Province Utah	ce County	Field Name Black Tail R	Well Status	
PI/UWI 301350 ime Lo	09800000 <b>Dg</b> Dur (hr)	End Time	State/Province Utah  Code	County Duchesne Category	Field Name Black Tail R BIT RP	idge DRILLING  WT= 18K M=45	9,408.0 Drilling & Completion
PI/UWI 301350 Time Lo Start Time 06:00	09800000 Dg Dur (hr) 8.00	End Time	State/Province Utah  Code	Category  DRILL ACTUAL	Field Name Black Tail R BIT BIT RP SP	Well Status DRILLING  WT= 18K M=45 M= 140	9,408.0 Drilling & Completion
PI/UWI 1301350 Fime Lo Start Time 06:00	09800000 Dg   Dur (hr)   8.00	End Time 14:00	State/Province Utah  Code 2	Category  DRILL ACTUAL  LUBRICATE RIG	Field Name Black Tail R BIT RP SP	Well Status DRILLING  WT= 18K M=45 M= 140  RVICE RIG	9,408.0 Drilling & Completion
PI/UWI 301350 Time Lo Start Time 16:00	09800000 Dg   Dur (hr)   8.00	End Time	State/Province Utah  Code	Category  DRILL ACTUAL	Field Name Black Tail R BIT RP SP SE BIT	Well Status DRILLING  WT= 18K M=45 M= 140  RVICE RIG  WT= 20K	9,408.0 Drilling & Completion
PI/UWI 301350 ime Lo tart Time 6:00	09800000 Dg   Dur (hr)   8.00	End Time 14:00	State/Province Utah  Code 2	Category  DRILL ACTUAL  LUBRICATE RIG	Field Name Black Tail R BIT RP SP SE BIT RP	Well Status DRILLING  WT= 18K M=45 M= 140  RVICE RIG	9,408.0 Drilling & Completion
PI/UWI 301350 ime Lo tart Time 6:00 4:00 4:30	09800000 Dg Dur (hr) 8.00 0.50 3.50	End Time 14:00 14:30 18:00	State/Province Utah  Code 2  7 2	Category DRILL ACTUAL  LUBRICATE RIG DRILL ACTUAL	Field Name Black Tail R BIT RP SP SE BIT RP SP	Well Status DRILLING  WT= 18K M=45 M= 140 RVICE RIG WT= 20K M= 40 M= 140	9,408.0 Drilling & Completion
A:00 4:00 4:30	09800000 Dg Dur (hr) 8.00 0.50 3.50	End Time 14:00 14:30 18:00	Code 2 7 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Category DRILL ACTUAL  LUBRICATE RIG DRILL ACTUAL  012 06:00 - 10/	Field Name Black Tail R  BIT RP SP  SE BIT RP SP  SE BIT RP SP	Well Status   DRILLING   DRILLI	9,408.0 Drilling & Completion  Com
API/UWI 4301350 Fime Lo Start Time 06:00 4:00 4:30	09800000 Dg Dur (hr) 8.00 0.50 3.50	End Time 14:00 14:30 18:00	State/Province Utah  Code 2  7 2	Category DRILL ACTUAL  LUBRICATE RIG DRILL ACTUAL  012 06:00 - 10/	Field Name Black Tail R BIT RP SP SE BIT RP SP	Well Status DRILLING  WT= 18K M=45 M= 140 RVICE RIG WT= 20K M= 40 M= 140 Well Status	9,408.0 Drilling & Completion
9//UWI 301350 ime Lo start Time 6:00 4:00 4:30 4:30 16-12 PI/UWI 301350 ime Lo	09800000 Pg 8.00 0.50 3.50 2D-36 BT 09800000 Pg	End Time 14:00 14:30 18:00	State/Province Utah  Code 2  7 2  O/15/20  State/Province Utah	County Duchesne  Category  DRILL ACTUAL  LUBRICATE RIG  DRILL ACTUAL  D12 06:00 - 10/2  Ce County Duchesne	Field Name Black Tail R  BIT RP SP  SE BIT RP SP  SP  16/2012 06  Field Name	Well Status DRILLING  WT= 18K M=45 M= 140 RVICE RIG WT= 20K M= 40 M= 140 Well Status	Total Depth (ftKB)  9,408.0 Drilling & Completion  Primary Job Type 9,408.0 Drilling & Completion
PI/UWI 1301350 Fime Lost art Time Lost art Time 16:00  4:00  4:30  16-12 PI/UWI 1301350 Fime Lost art Time	09800000 Dg Dur (hr) 8.00 0.50 3.50 2D-36 BT 09800000 Dg Dur (hr)	End Time 14:00 14:30 18:00	State/Province Utah  Code 2  7 2  O/15/20  State/Province Utah  Code	County Duchesne  Category  DRILL ACTUAL  LUBRICATE RIG  DRILL ACTUAL  012 06:00 - 10/  County Duchesne  Category	Field Name Black Tail R  BIT RP SP SE BIT RP SP  16/2012 06 Field Name Black Tail R	Well Status DRILLING  WT= 18K M=45 M= 140 RVICE RIG  WT= 20K M= 40 M= 140  EOO  Well Status DRILLING	9,408.0 Drilling & Completion  Com  Total Depth (ftKB) Primary Job Type
16-12 PI/UWI PI/	09800000 Dg Dur (hr) 8.00 0.50 3.50 2D-36 BT 09800000 Dg Dur (hr)	End Time 14:00 14:30 18:00	State/Province Utah  Code 2  7 2  O/15/20  State/Province Utah	County Duchesne  Category  DRILL ACTUAL  LUBRICATE RIG  DRILL ACTUAL  D12 06:00 - 10/2  Ce County Duchesne	Field Name Black Tail R  BIT RP SP SE BIT RP SP  SE BIT RP SP SP  16/2012 06 Field Name Black Tail R	Well Status DRILLING  WT= 18K M=45 M= 140 RVICE RIG WT= 20K M= 40 M= 140 Well Status	Total Depth (ftKB) Primary Job Type 9,408.0 Drilling & Completion
16-12 PI/UWI PI/	09800000 Dg Dur (hr) 8.00 0.50 3.50 2D-36 BT 09800000 Dg Dur (hr)	End Time 14:00 14:30 18:00	State/Province Utah  Code 2  7 2  O/15/20  State/Province Utah  Code	County Duchesne  Category  DRILL ACTUAL  LUBRICATE RIG  DRILL ACTUAL  012 06:00 - 10/  County Duchesne  Category	Field Name Black Tail R  BIT RP SP  SE BIT RP SP  16/2012 06  Field Name Black Tail R	Well Status DRILLING  WT= 18K M=45 M= 140 RVICE RIG  WT= 20K M= 40 M= 140  COO  Well Status DRILLING	Total Depth (ftKB) Primary Job Type 9,408.0 Drilling & Completion
14:00 14:30 14:30 14:30 16:00 16:00	09800000  Dg  0.50  3.50  2D-36 BT  09800000  Dg  Dur (hr)  1.50	End Time 14:00 14:30 18:00	State/Province Utah  Code 2  7 2  O/15/20  State/Province Utah  Code	County Duchesne  Category  DRILL ACTUAL  LUBRICATE RIG  DRILL ACTUAL  012 06:00 - 10/  County Duchesne  Category	Field Name Black Tail R  BIT RP SP SE BIT RP SP  16/2012 06 Field Name Black Tail R  BIT RP SP	Well Status   DRILLING	Total Depth (ftKB) Primary Job Type 9,408.0 Drilling & Completion
API/UWI 4301350 Fime Lo Start Time 06:00 4:00 4:30	09800000  Dg  0.50  3.50  2D-36 BT  09800000  Dg  Dur (hr)  1.50	End Time 14:00  14:30 18:00  R 10  End Time 07:30	State/Province Utah  Code 2  7 2  O/15/20  State/Province Utah  Code 2	County Duchesne  Category  DRILL ACTUAL  LUBRICATE RIG  DRILL ACTUAL  D12 06:00 - 10/  County Duchesne  Category  DRILL ACTUAL	Field Name Black Tail R  BIT RP SP SE BIT RP SP  16/2012 06 Field Name Black Tail R  BIT RP SP	Well Status   DRILLING	Com  Total Depth (ftKB)  9,408.0   Primary Job Type  9,408.0   Drilling & Completion
16-12 19/1/0Wi 1301350 19/1/0Wi 14:00 14:00 14:30 16-12 19/1/0Wi 1301350 16:00 17:30	09800000  Deg    Dur (hr)   8.00    0.50   3.50    2D-36 BT  09800000  Deg    Dur (hr)   1.50    5.50	End Time 14:00  14:30 18:00  R 10  End Time 07:30	State/Province Utah  Code 2  7 2  O/15/20  State/Province Utah  Code 2	County Duchesne  Category  DRILL ACTUAL  LUBRICATE RIG  DRILL ACTUAL  D12 06:00 - 10/  County Duchesne  Category  DRILL ACTUAL	Field Name Black Tail R  BIT RP SP SE BIT RP SP  16/2012 06 Field Name Black Tail R  BIT RP SP  PU PA BIT	WI Status DRILLING  WT= 18K M=45 M= 140 RVICE RIG  WT= 20K M= 40 M= 140  WI Status DRILLING  WI Status DRILLING  WT= 20K M= 40 MP SWEEPS AND LET SC CKING  WT= 20K	Com  Total Depth (ftKB)  9,408.0   Primary Job Type  9,408.0   Drilling & Completion
14:00 14:30 14:30 14:30 16:00 16:00	09800000  Deg    Dur (hr)   8.00    0.50   3.50    2D-36 BT  09800000  Deg    Dur (hr)   1.50    5.50	End Time 14:00  14:30 18:00  End Time 07:30  13:00	State/Province Utah  Code 2  7 2  O/15/20  State/Province Utah  Code 2	County Duchesne  Category  DRILL ACTUAL  LUBRICATE RIG  DRILL ACTUAL  D12 06:00 - 10/  County Duchesne  Category  DRILL ACTUAL  COND MUD & CIRC	Field Name Black Tail R  BIT RP SP  SE BIT RP SP  16/2012 06 Field Name Black Tail R  BIT RP SP  PU PA  BIT RP	Well Status DRILLING  WT= 18K M=45 M= 140 RVICE RIG  WT= 20K M= 40 M= 140  Well Status DRILLING  WT= 20K M= 40 M= 140 MP SWEEPS AND LET SC CKING  WT= 20K M= 40 MP SWEEPS AND LET SC CKING	Com  Total Depth (ftKB)  9,408.0   Primary Job Type  9,408.0   Drilling & Completion
16-12 19/1/0Wi 1301350 19/1/0Wi 14:00 14:00 14:30 16-12 19/1/0Wi 1301350 16:00 17:30	09800000 Dg	End Time 14:00  14:30 18:00  End Time 07:30  13:00	State/Province Utah  Code 2  7 2  O/15/20  State/Province Utah  Code 2	County Duchesne  Category  DRILL ACTUAL  LUBRICATE RIG  DRILL ACTUAL  D12 06:00 - 10/  County Duchesne  Category  DRILL ACTUAL  COND MUD & CIRC	Field Name Black Tail R  BIT RP SP SE BIT RP SP  16/2012 06 Field Name Black Tail R  BIT RP SP  16/2012 06 Field Name Black Tail R  BIT RP SP	WI Status DRILLING  WT= 18K M=45 M= 140 RVICE RIG  WT= 20K M= 40 M= 140  WI Status DRILLING  WI Status DRILLING  WT= 20K M= 40 MP SWEEPS AND LET SC CKING  WT= 20K	Total Depth (ftKB) Primary Job Type 9,408.0 Drilling & Completion  Com  Com  Com  Com  Com  Com  Com  C

B	Bill B	arret	t Co	rporation							
Time Lo	<b>a</b>										
Start Time	Dur (hr)	End Time	Code	Category					Com		
15:30	0.50	16:00	2	DRILL ACTUAL		BIT WT= 20K RPM= 40 SPM= 140					
16:00	1.50	17:30	5	COND MUD & CIRC		CIRC., PUMP SWEEPS, AND REBUILD LOSSES					
17:30	0.50	18:00	7	LUBRICATE RIG	SERVICE RIG						
18:00	0.50	18:30	5	COND MUD & CIRC	CIRC. & COND. AND REBUILD LOSSES						
18:30	4.50	23:00	2	DRILL ACTUAL		BIT WT= 20K RPM= 40 SPM= 150					
23:00		00:00	5	COND MUD & CIRC			COND. REBUILD	LOSSES			
00:00		02:30	2	DRILL ACTUAL		BIT WT= RPM= 40 SPM=150					
02:30		06:00	5	COND MUD & CIRC			OND., REBUILD	LOSSES			
	D-36 BT			012 06:00 - 10/1						T	
4301350			State/Province  Jtah	County Duchesne	Field Name Black Ta	e ail Ridge	Well Status DRILLING		Total Depth (ftKB)	Primary Job Type 9,408.0 Drilling & Completion	
Time Lo	<b>g</b> Dur (hr)	End Time	Code	Category					Com		
06:00		08:30	5	COND MUD & CIRC		CIRC. & F	REBUILD LOSSES	S	Com		
08:30	5.50	14:00	2	DRILL ACTUAL		BIT WT= RPM= 40 SPM= 140					
14:00	0.50	14:30	7	LUBRICATE RIG		SERVICE	SERVICE RIG				
14:30		20:30	2	DRILL ACTUAL		BIT WT= 24K RPM= 40 SPM=140					
20:30		06:00	5	COND MUD & CIRC			COND. MUD, REE	BUILD LOSS	SES		
16-12	D-36 BT		)/17/2( State/Province	012 06:00 - 10/1 e	8/2012   Field Name		Well Status		Total Depth (ftKB)	Primary Job Type	
4301350 Time Lo			Jtah	Duchesne	1	ail Ridge	DRILLING		Total Deptil (IIIID)	9,408.0 Drilling & Completion	
Start Time	Dur (hr)	End Time		Category		OIDO AN	D DEDLIII D I OO	2050	Com		
06:00		11:00	5	COND MUD & CIRC			D REBUILD LOS	SSES			
11:00 12:00		12:00 14:30	6 5	TRIPS COND MUD & CIRC		T.O.O.H.	SH CIRC., & REB	א א א א א א א א	ME		
14:30		15:00	6	TRIPS		T.I.H. 5 S		SOILD VOLU	IVIE		
15:00		17:00	5	COND MUD & CIRC			COND., REBUILD	O VOLUME. A	AND RAISE LO	CM %	
17:00		17:30	6	TRIPS		T.I.H. 5 S					
17:30		03:30	2	DRILL ACTUAL		BIT WT= RPM= 40 SPM= 140					
03:30		04:00	7	LUBRICATE RIG		SERVICE					
04:00	2.00	06:00	2	DRILL ACTUAL		BIT WT= RPM=40 SPM=140					
	D-36 BT			012 06:00 - 10/1							
API/UWI 4301350			State/Provinc Jtah	County Duchesne	Field Name Black Ta	e ail Ridge	Well Status DRILLING		Total Depth (ftKB)	Primary Job Type 9,408.0 Drilling & Completion	
Start Time	Dur (hr)	End Time	Code	Category					Com		
06:00		07:00	2	DRILL ACTUAL		Drill/Slide	3277-3313		Com		
07:00		07:30	5	COND MUD & CIRC		Lost Retu	rns				
07:30	1.50	09:00	2	DRILL ACTUAL		Drill 3313					
09:00		10:00	5	COND MUD & CIRC			displace DP w/ o	clean mud			
10:00		13:30	6	TRIPS			POOH change MM & Bit				
13:30	0.50	14:00	7	LUBRICATE RIG		Rig Service					
						_	e				
14:00 16:30		16:30	6	TRIPS DRILL ACTUAL		TIH Drill 3340					



PI/UWI 30135098	00000		state/Province Jtah	ce County Duchesne	Field Name Black Ta		Well Status DRILLING	Total Depth (ftKB) Primary Job Type 9,408.0 Drilling & Completion		
ime Log	00000		Jian	Ducheshe	DIACK 1	all Kluge	DRILLING	9,406.0 Drilling & Completion		
Start Time	Dur (hr)	End Time	Code	Category				Com		
06:00		15:30	2	DRILL ACTUAL		,	3510-3658			
15:30		16:00	7	LUBRICATE RIG		Rig Servi				
16:00		00:30	2	DRILL ACTUAL			e 3658-3781 Well turr			
00:30	5.50	06:00	5	COND MUD & CIRC		Lost Full stds.	Returns pump high L	.CM sweeps and work pipe.Spot sweep on bottom & pull		
16-12D	-36 BT		)/20/20 state/Province	012 06:00 - 10/2	1/2012   Field Name		Well Status	Total Depth (ftKB)   Primary Job Type		
130135098	00000	ι	Jtah	Duchesne	Black Ta	ail Ridge	DRILLING	9,408.0 Drilling & Completion		
Time Log										
Start Time 06:00	Dur (hr)	End Time 07:30	Code 5	COND MUD & CIRC		Circ. buil	d swoon	Com		
07:30	0.50		6	TRIPS		Trip out 5	<u> </u>			
		10:00	5	COND MUD & CIRC		•		d volume work pipe returns while swabbing		
08:00 10:00		10:30		TRIPS		Trip out 5		d volume work pipe returns write swapping		
			6	_		'		Id l		
0:30		13:00	5	COND MUD & CIRC		sweep		ld volume work pipe returns while swabbing spot 42% lc		
13:00		15:30	6	TRIPS			ydown reamers and o			
15:30	1.50		20	DIRECTIONAL WORK			ols change batteries i			
17:00		19:00	6	TRIPS			1874' break circ. full			
19:00	1.50		5	COND MUD & CIRC			•	-mix before finish trip in		
20:30	2.50	23:00	6	TRIPS		TIH to3757 stage in break circ @ 2824' &3297' full returns				
23:00	0.50	23:30	3	REAMING		Pump LC	M sweep and wash t	o 3781'		
23:30	6.50	06:00	2	DRILL ACTUAL		Drilling 3	781-3897 Full Return	S		
16-12D	-36 BT	R 10	/21/2	012 06:00 - 10/2	2/2012	06:00				
API/UWI	<del>•••</del>		state/Province		Field Name		Well Status	Total Depth (ftKB) Primary Job Type		
430135098	00000	ι	Jtah	Duchesne	Black Ta	ail Ridge	DRILLING	9,408.0 Drilling & Completion		
Time Log	5 (1)		1	T						
Start Time 06:00	Dur (hr) 5,00	End Time 11:00	Code 2	DRILL ACTUAL		Drill 3897	7-3947	Com		
0.00	3.00	11.00	_	DIVILLE AOTOAL			ey @ 3952 2.50 inc.	269.84 az		
11:00	0.50	11:30	7	LUBRICATE RIG		Rig servi	ce			
11:30	1.50	13:00	2	DRILL ACTUAL		Drill 3947	'-4015 TD f/ Surface			
13:00	1.50	14:30	5	COND MUD & CIRC		Circ. 2 sv	veeps			
14:30	3.50	18:00	6	TRIPS		POOH				
18:00	2.00	20:00	6	TRIPS		Safety M	eeting w/ Franks,RU	laydown machine,LD 8"& Dirc. tools		
20:00		05:00	12	RUN CASING & CEMEN	Т	-		s rig up casers run 9 5/8 casing		
05:00		06:00	12	RUN CASING & CEMEN			eeting w/ Halliburton	<u> </u>		
16-12D				012 06:00 - 10/2				- 54		
.PI/UWI 1301350980	00000		state/Province Jtah	County Duchesne	Field Name Black Ta		Well Status DRILLING	Total Depth (ftKB) Primary Job Type 9,408.0 Drilling & Completion		
Time Log										
Start Time 06:00	Dur (hr) 12.00	End Time	Code 12	RUN CASING & CEMEN	Т	Coment	w/ halliburton No Bate	urns pump 4-175 sk topjobs 1 1/2 -2 hrs between jobs		
				RUN CASING & CEMEN						
		18:30	12				ir crew held safety m	· · · · · · · · · · · · · · · · · · ·		
18:00		19:00	12	RUN CASING & CEMEN	ı		.5 bbl 175 sks top job	O INU INERUMS		
18:00	3.00	22:00	13	WAIT ON CEMENT	_	WOC	Elliage I : : : :	N. B.		
18:00 18:30 19:00			12	RUN CASING & CEMEN	I		.5 bbl 175 sks top job	No Returns		
18:00 18:30 19:00 22:00	1.00	02:00	13	WAIT ON CEMENT		WOC				
18:00 18:30 19:00 22:00 23:00	3.00		02:00 1.00 03:00 12 RUN CASING & CEMENT				.5 bbl 175 sks top job	No Returns		
18:00 18:30 19:00 22:00 23:00 02:00	3.00 1.00	03:00				WOC				
18:00 18:30 19:00 22:00 23:00 02:00	3.00 1.00		13	WAIT ON CEMENT		*****				
18:00 18:30 19:00 22:00 23:00 02:00	3.00 1.00 3.00	03:00 06:00	13	WAIT ON CEMENT 012 06:00 - 10/2	4/2012					
18:00 18:30 19:00 22:00 23:00	3.00 1.00 3.00 - <b>36 BT</b>	03:00 06:00 <b>R 10</b>	13	012 06:00 - 10/2	Field Name	06:00	Well Status   DRILLING	Total Depth (ftKB) Primary Job Type 9,408.0 Drilling & Completion		

#### Sundry Number: 31779 API Well Number: 43013509800000 **Bill Barrett Corporation** Dur (hr) Start Time End Time Code Category Com 06:00 3.00 09:00 13 WAIT ON CEMENT 09:00 1.00 10:00 12 **RUN CASING & CEMENT** Pump 175 sks 15.8# top out WOC 10:00 3.00 13:00 13 WAIT ON CEMENT 13:00 1.00 14:00 12 **RUN CASING & CEMENT** Pump 24.5bbl 15.8# top out 14:00 4.00 18:00 13 WAIT ON CEMENT WOC 18:00 8.50 02:30 14 NIPPLE UP B.O.P Cutoff casing & weld on wellhead, Nipple Up 02:30 3.50 06:00 15 TEST B.O.P Test BOP equipment as follows: Blind Rams, Pipe Rams, Choke line, IBOP, Choke Manifold Upper & Lower Kelly Valve and Safety valve to 5000 psi. Hold f/ 10 min. Test Annular to 2500 psi. hold f/ 10 min.

16-12D-36 BTR	10/24/2012 0	6:00 - 10/25	/2012 06:00			
API/UWI	State/Province	County	Field Name	Well Status	Total Depth (ftKB)	Primary Job Type
43013509800000	Utah	Duchesne	Black Tail Ridge	DRILLING	9,408.0	Drilling & Completion
Time Log						

Time Log								
Start Time	Dur (hr)	End Time	Code	Category	Com			
06:00	1.00	07:00	15	TEST B.O.P	Test casing to 1500psiand hold f/30 min.			
07:00	0.50	07:30	21	OPEN	set wear bushing			
07:30	1.50	09:00	20	DIRECTIONAL WORK	Pick up dirc tools and orient			
09:00	2.00	11:00	6	TRIPS	Trip in tag up @ 3965			
11:00	1.50	12:30	22	OPEN	Drill float equip.			
12:30	0.50	13:00	2	DRILL ACTUAL	drilling formation 4015-4031			
13:00	0.50	13:30	23	OPEN	Fit 10.5 equivalent 438 psi held 430 f/ 15 min			
13:30	3.50	17:00	2	DRILL ACTUAL	Drill/slide 4031-4237			
17:00	0.50	17:30	7	LUBRICATE RIG	Rig service			
17:30	12.50	06:00	2	DRILL ACTUAL	Drill 4237-4681			

## 16-12D-36 BTR 10/25/2012 06:00 - 10/26/2012 06:00

API/UWI	State/Province	County	Field Name	Well Status	Total Depth (ftKB)	Primary Job Type
43013509800000	Utah	Duchesne	Black Tail Ridge	DRILLING	9,408.0	Drilling & Completion
Time Log						

Time Log										
	Start Time	Dur (hr)	End Time	Code	Category					
	06:00	10.50	16:30	2	DRILL ACTUAL	Drill/Slide 4681-5094				
	16:30	0.50	17:00	7	LUBRICATE RIG	Rig Service				
	17:00	13.00	06:00	2	DRILL ACTUAL	Drill/Slide 5094-5538				

#### 10/26/2012 06:00 - 10/27/2012 06:00 16-12D-36 BTR

ield Name Well Status Total Depth (ftKB) Primary Job Type Black Tail Ridge 43013509800000 Duchesne **DRILLING** 9,408.0 Drilling & Completion Time Log

	9				
Start Time	Start Time Dur (hr) End Time		Code	Category	
06:00	10.50	16:30	2	DRILL ACTUAL	Drill/Slide 5538-5853
16:30	0.50	17:00	7	LUBRICATE RIG	Rig Service
17:00	13.00	06:00	2	DRILL ACTUAL	Drill/Slide 5853-6172 Slide footage-228' rotate -448'

#### 10/27/2012 06:00 - 10/28/2012 06:00

Time Log							
43013509800000	Utah	Duchesne	Black Tail Ridge	DRILLING	9,408.0	II Irilling X. Completion	
AI I/OWI	State/1 TOVITICE	County	i leid i valifie	Well Olalus	Total Deptil (ItiND)	i iiiiaiy sob i ype	

06:00	10.50	16:30	2	DRILL ACTUAL
16:30	0.50	17:00	7	LUBRICATE RIG

Start Time Dur (hr) End Time Code

06:00	10.50	16:30	2	DRILL ACTUAL	Drill/Slide 6172-6521
16:30	0.50	17:00	7	LUBRICATE RIG	Rig Service
17:00	13.00	06:00	2	DRILL ACTUAL	Drill/Slide 6521-6850

## 16-12D-36 BTR 10/28/2012 06:00 - 10/29/2012 06:00

API/UWI	State/Province	County	Field Name	Well Status	Total Depth (ftKB)	Primary Job Type
43013509800000	Utah	Duchesne	Black Tail Ridge	DRILLING	9,408.0	
Time Log						

1 11	ne	LU	y
_			

Tillie LO	the Log							
Start Time	Dur (hr)	End Time	Code	Category	Com			
06:00	10.50	16:30	2	DRILL ACTUAL	Drill/Slide 6850-7252			

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Time Lo	Time Log								
Start Time	Dur (hr)	End Time	Code	Category	Com				
16:30	0.50	17:00	7	LUBRICATE RIG	Rig Service				
17:00	13.00	06:00	2	DRILL ACTUAL	Drill/Slide 7252-7684				

## 16-12D-36 BTR 10/29/2012 06:00 - 10/30/2012 06:00

API/UWI	State/Province	County	Field Name	Well Status	Total Depth (ftKB)	Primary Job Type
43013509800000	Utah	Duchesne	Black Tail Ridge	DRILLING	9,408.0	Drilling & Completion
Time Lea				·		·

Time Lo	ïme Log							
Start Time	Dur (hr)	End Time	Code	Category	Com			
06:00	11.00	17:00	2	DRILL ACTUAL	Drill/Slide 7684-8139			
17:00	0.50	17:30	7	LUBRICATE RIG	Rig Service			
17:30	7.50	01:00	2	DRILL ACTUAL	Drill/Slide 8139-8388 Lost Returns			
01:00	1.00	02:00	5	COND MUD & CIRC	Circ high LCM sweeps and bring active to 10-15%			
02:00	4.00	06:00	2	DRILL ACTUAL	Drill/Slide 8388-8431			

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# TO35 ROBW 5-12

From:

pat506 <pat506@billbarrettcorp.com>

To:

"caroldaniels@utah.gov" <caroldaniels@utah.gov>, "dennisingram@utah.gov"...
Tracey Fallang <tfallang@billbarrettcorp.com>, Venessa Langmacher <vlang...

CC: Date:

11/5/2012 7:40 AM

Subject:

24 HR NOTICE FOR CSG. RUN & CMT JOB

## **GOOD MORNING ALL;**

THIS IS A 24 HR NOTICE FOR CSG, AND CMT JOB FOR WELL# 16-12D-36 BTR, API# 43-013-50980...

IF THERE ARE ANY QUESTIONS, COMMENTS, AND/OR CONCERNS CONTACT 435-828-6095 OR 970-361-3264

#### **THANKS**

BILL BARRETT CORP. PATTERSON 506. 435-828-6095 970-361-3264

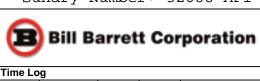
> RECEIVED NOV 0 6 2012

DIV. OF OIL, GAS & MINING

	STATE OF UTAH				FORM 9
1	DEPARTMENT OF NATURAL RESOURCE DIVISION OF OIL, GAS, AND MIN		i	5.LEASE 2OG00	DESIGNATION AND SERIAL NUMBER: 05608
SUNDR	RY NOTICES AND REPORTS	ON '	WELLS	6. IF IND	IAN, ALLOTTEE OR TRIBE NAME:
	posals to drill new wells, significantly reenter plugged wells, or to drill horizon for such proposals.			7.UNIT o	r CA AGREEMENT NAME:
1. TYPE OF WELL Oil Well				1 -	NAME and NUMBER: 0-36 BTR
2. NAME OF OPERATOR: BILL BARRETT CORP				<b>9. API NI</b> 43013	JMBER: 509800000
3. ADDRESS OF OPERATOR: 1099 18th Street Ste 2300	, Denver, CO, 80202		NE NUMBER: 312-8164 Ext	9. FIELD ALTAM	and POOL or WILDCAT: ONT
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0825 FSL 0260 FEL				COUNTY	
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: SESE Section: 1	HIP, RANGE, MERIDIAN: 2 Township: 03.0S Range: 06.0W Merid	lian: l	J	STATE: UTAH	
11. CHEC	K APPROPRIATE BOXES TO INDICAT	ΓE ΝΑ	ATURE OF NOTICE, REPOR	T, OR C	THER DATA
TYPE OF SUBMISSION			TYPE OF ACTION		
	ACIDIZE		LTER CASING		CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	□ c	HANGE TUBING		CHANGE WELL NAME
- Approximate date from film class.	CHANGE WELL STATUS	□ c	OMMINGLE PRODUCING FORMATIONS		CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	☐ F	RACTURE TREAT		NEW CONSTRUCTION
	OPERATOR CHANGE	□ Р	LUG AND ABANDON		PLUG BACK
SPUD REPORT	PRODUCTION START OR RESUME	□ R	ECLAMATION OF WELL SITE		RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION	□ s	IDETRACK TO REPAIR WELL		TEMPORARY ABANDON
	TUBING REPAIR	□ v	ENT OR FLARE		WATER DISPOSAL
DRILLING REPORT     Report Date:	WATER SHUTOFF	□s	I TA STATUS EXTENSION		APD EXTENSION
12/3/2012	WILDCAT WELL DETERMINATION	$\Box$ .	THER	отні	ER:
40 DECORIDE BRODOCED OR					<u>'</u>
	COMPLETED OPERATIONS. Clearly show a 12 monthly drilling activity r			FOI	Accepted by the Utah Division of il, Gas and Mining R RECORD ONLY December 04, 2012
NAME (PLEASE PRINT) Brady Riley	<b>PHONE NUMB</b> 303 312-8115	ER	TITLE Permit Analyst		
<b>SIGNATURE</b> N/A			<b>DATE</b> 12/3/2012		

Bill Barrett Corporation	n
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.PI/UWI 301350	9800000		State/Province Jtah	County Duchesne	Field Name Black Ta		Well Status COMPLETION	Total Depth (ftKB) Primary Job Type 10,555.0 Drilling & Completio
Time Lo	g						1	, ,
Start Time	. ,	End Time 12:00	Code 2	DRILL ACTUAL		BIT WT=	24 K	Com
06:00	6.00	12:00	2	DRILL ACTUAL		RPM= 50 SPM=160	)	
12:00	0.50	12:30	21	OPEN			T ROT. HEAD RUBBEI	RS
12:30		14:30	2	DRILL ACTUAL		BIT WT=	24K	
						RPM= 50 SPM= 16		
14:30	0.50	15:00	7	LUBRICATE RIG		SERVICE	E RIG	
15:00	15.00	06:00	2	DRILL ACTUAL		BIT WT= RPM= 50 SPM= 15	)	
16-12 API/UWI	D-36 BT		1/2/20°	12 06:00 - 11/3/2 ce   County	2012 06		Well Status	Total Depth (ftKB)   Primary Job Type
	9800000		Jtah	Duchesne	Black Ta		COMPLETION	10,555.0 Drilling & Completio
Time Lo								
Start Time 06:00	Dur (hr)	End Time 07:00	Code 5	COND MUD & CIRC		CIRC &	COND. MUD., PUMP S	Com SWEEP & DRY JOB
07:00		13:00	6	TRIPS			R BIT & MUD MTR	
13:00		14:00	20	DIRECTIONAL WORK			UT BIT & MTR'S RESC	RIBE & ORIENTATE
14:00		20:30	6	TRIPS		T.I.H		
20:30		06:00	2	DRILL ACTUAL		BIT WT= RPM= 50 SPM=150	)	
_	D-36 BT			12 06:00 - 11/4/2				
API/UWI 4301350	9800000		State/Province Jtah	County Duchesne	Field Name Black Ta		Well Status COMPLETION	Total Depth (ftKB) Primary Job Type 10,555.0 Drilling & Completio
Time Lo			<b>.</b>	2 40.100.10	Diagn. 10	go		ciococo   Zimmig a compleme
Start Time	Dur (hr)	End Time		Category		DIT WIT	451/	Com
06:00	11.50	17:30	2	DRILL ACTUAL		BIT WT= RPM=55 SPM=150		
17:30	0.50	18:00	7	LUBRICATE RIG		SERVICE	E RIG	
18:00	12.00	06:00	2	DRILL ACTUAL		BIT WT= RPM=55 SPM= 17		
	D-36 BT			12 06:00 - 11/5/2	2012 06	:00		
	9800000		State/Province Jtah	County Duchesne	Field Name Black Ta	il Ridge	Well Status COMPLETION	Total Depth (ftKB) Primary Job Type 10,555.0 Drilling & Completio
Time Lo Start Time	Dur (hr)	End Time	Code	Category				Com
06:00			2	DRILL ACTUAL		BIT WT= RPM= 55 SPM= 16	5	COII
15:00	l	16:00	5	COND MUD & CIRC		CIRC. &	COND. MUD, PUMP S	WEEPS
16:00	l	16:30	7	LUBRICATE RIG	·	SERVICE		
16:30		19:30	6	TRIPS			TRIP TO LAST BIT TRI	Р
19:30		20:30	5	COND MUD & CIRC			COND. MUD	
20:30		02:30	6	TRIPS		TRIP FO		
02:30		06:00	11	WIRELINE LOGS			LOG WELL WITH HAI	LIBURTON SERVICES
16-12	D-36 BT			12 06:00 - 11/6/2				
	9800000		State/Province Jtah	County Duchesne	Field Name Black Ta		Well Status COMPLETION	Total Depth (ftKB) Primary Job Type 10,555.0 Drilling & Completio
4301350		End Time	Code	Category				Com
4301350 Time Lo	Dur (hr)	, Liiu iiiie	Oode			ODENLI	OLE LOGS WITH HALL	
4301350 <b>Time Lo</b> Start Time		10:00	11	WIRELINE LOGS		OPEN H	OLL LOGO WITHINALI	EIDOI (TOT)
API/UWI 4301350 <b>Time Lo</b> Start Time 06:00		10:00	11	WIRELINE LOGS			RS DEPTH= 10,550.00'	



E	Bill B	arret	tt Co	rporation						
Time Lo										
Start Time		End Time		Category		055/40	- DIO	Com		
16:30		17:00	7	LUBRICATE RIG		SERVICE RIG CIRC. & COND. MUD, AND RIG UP L/D TRUCK & CREW				
17:00	1	19:00	5	COND MUD & CIRC			,			
19:00		06:00	21	OPEN		1	, AND BREAK KELLY ALL	THE WAY DOWN		
16-12 API/UWI	2D-36 BT		1/6/20 <sup>s</sup>	12 06:00 - 11/7/2	012 06 Field Nam		Well Status	Total Depth (ftKB)   Primary Job Type		
4301350	09800000		Utah	Duchesne		ail Ridge	COMPLETION	10,555.0 Drilling & Completion		
Time Lo		I = . =	1							
Start Time 06:00		End Time	Code 21	OPEN		I /D D P	AND D.C.'S, BREAK KELL	Com V DOWN		
06:30	1	07:00	22	OPEN			EAR BUSHING	I DOWN		
07:00		18:00			-		RUN CSG. WITH FRANK	IC MICCIATES		
07:00	11.00	18:00	12	RUN CASING & CEMENT		RAN 251		0 CSG WITH 80 CENTRALIZERS, & 3 MKR JT'S		
18:00	2.00	20:00	5	COND MUD & CIRC		CIRC WI	TH RIG PUMP			
20:00	4.50	00:30	12	RUN CASING & CEMENT		PUMPED PUMPED PUMPED	PUMP CMT WITH HALLII 50 BBL'S OF WATER, SU 409 BBL'S/985 SX'S OF 172 BBL'S/680 SX'S OF 242.5 BBL'S OF DISPLACE	JPER FLUSH, WATER 11.0#, LEAD CMT 13.5#, TAIL CMT		
00:30	1.00	01:30	14	NIPPLE UP B.O.P		NIPPLE I	DOWN STACK			
01:30	1.00	02:30	23	OPEN		l .	PS AND ROUGH CUT CSC ET AT 140K	3		
02:30	3.50	06:00	22	OPEN		CLEANIN	IG STEEL PITS			
16-12	D-36 BT	R 1	1/8/20	12 06:00 - 11/9/2	012 06	:00				
API/UWI	09800000		State/Province Utah	County Duchesne	Field Name	e ail Ridge	Well Status COMPLETION	Total Depth (ftKB) Primary Job Type 10,555.0 Drilling & Completion		
Time Lo			Utan	Ducheshe	DIACK 1	all Kluge	COMPLETION	10,333.0 Drilling & Completion		
Start Time		End Time	Code	Category				Com		
16-12	D-36 BT			012 06:00 - 11/14			lw ra			
	09800000		State/Provinc Utah	County Duchesne	Field Nam	<sub>e</sub> ail Ridge	Well Status COMPLETION	Total Depth (ftKB) Primary Job Type 10,555.0 Drilling & Completion		
Time Lo	•	•		•	•					
Start Time 06:00		End Time 06:00	GOP	General Operations		CAP. MA		Com AR WITH DIRT. CHECK PRESSURE. ND NIGHT 17# CSG. NU 7" 5K TBG HEAD. PRES TEST		
16-12	 2D-36 BT	 'R 1'	 1/14/2(	│ 012 06:00 - 11/15	/2012	06:00				
API/UWI			State/Province	1 '	Field Nam		Well Status	Total Depth (ftKB) Primary Job Type		
	09800000	l	Utah	Duchesne	Black Ta	ail Ridge	COMPLETION	10,555.0 Drilling & Completion		
Time Lo		lee	1 0.1.	0.1				0		
Start Time 06:00		End Time	LOGG	Category Logging		CBL/GR/		0,418'. FC AT 10,452'. 34' FILL. RUN 000 PSI. BHT 217*. TOC 3260'. SJ 9904'-9936', 4O SLB.		
	2D-36 BT			012 06:00 - 11/26						
API/UWI	09800000		State/Provinc Utah	County Duchesne	Field Nam	e ail Ridge	Well Status COMPLETION	Total Depth (ftKB) Primary Job Type 10,555.0 Drilling & Completion		
Time Lo			Utan	Ducheshe	DIACK 1	all Kluge	COMPLETION	10,333.0 Drilling & Completion		
Start Time		End Time	Code	Category				Com		
06:00		06:00	GOP	General Operations		Set Frac Filling Fra				
16-12	D-36 BT	R 1	1/26/2	012 06:00 - 11/27	//2012	06:00				
API/UWI 4301350	09800000		State/Province Utah	County Duchesne	Field Nam	e ail Ridge	Well Status COMPLETION	Total Depth (ftKB) Primary Job Type 10,555.0 Drilling & Completion		
Time Lo		'	Ciaii	Ducheshe	DIACK T	an Muge	JOONI LETION	1 10,000.0[Dinning & Completion		
Start Time		End Time	Code	Category				Com		
06:00		06:00	GOP	General Operations		Construct Filling Fra	tion Crew Working On Fac ac Line.	ilities.		
	•		•	•		•				



116-12D-36 BTR 11/27/2012 06:00 - 11/28/2012 06:0	16-12D-36 BTR	11/27/2012 06:00	- 11/28/2012 06:00
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Primary Job Type 10,555.0 Drilling & Completion County Duchesne 43013509800000 Utah Black Tail Ridge COMPLETION Time Log

Field Name

Well Status

Sta	rt Time	Dur (hr)	End Time	Code	Category	Com
06	:00	24.00	06:00	GOP	General Operations	SET SAND TRAP. SET 10K CHOKE MANIFOLD. PLUMB IN FLOW BACK EQUIP TO FBT. CONSTRUCTION FINISHED.

#### 11/28/2012 06:00 - 11/29/2012 06:00 16-12D-36 BTR

County Duchesne Field Name Black Tail Ridge Well Status COMPLETION Primary Job Type 10,555.0 Drilling & Completion Total Depth (ftKB) 43013509800000 Utah

Time Log

	,				
Start Time	Dur (hr)	End Time	Code	Category	Com
06:00	25.00	07:00	PTST	Pressure Test	HSM. CHECK PRESSURE. ND NIGHT CAP. NU FRAC MANDREL, FRAC VALVES,
					AND FRAC HEAD. HOOK UP TO FLOW LINES. PRES TEST CSG, FRAC VALVES,
					SAND TRAP, MANIFOLD AND FLOW LINES.

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	STATE OF UTAH			FORM 9
ı	DEPARTMENT OF NATURAL RESO DIVISION OF OIL, GAS, AND		i	5.LEASE DESIGNATION AND SERIAL NUMBER: 2OG0005608
SUNDR	RY NOTICES AND REPORT	rs on	WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	posals to drill new wells, significar reenter plugged wells, or to drill ho n for such proposals.			7.UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Oil Well				8. WELL NAME and NUMBER: 16-12D-36 BTR
2. NAME OF OPERATOR: BILL BARRETT CORP				9. API NUMBER: 43013509800000
3. ADDRESS OF OPERATOR: 1099 18th Street Ste 2300	, Denver, CO, 80202		NE NUMBER: 312-8164 Ext	9. FIELD and POOL or WILDCAT: ALTAMONT
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0825 FSL 0260 FEL				COUNTY: DUCHESNE
QTR/QTR, SECTION, TOWNSH	<b>HIP, RANGE, MERIDIAN:</b> 2 Township: 03.0S Range: 06.0W M	leridian: I	J	STATE: UTAH
11. CHECI	K APPROPRIATE BOXES TO INDI	CATE N	ATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION			TYPE OF ACTION	
	ACIDIZE		LITER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS		HANGE TUBING	CHANGE WELL NAME
Approximate date work will start:	CHANGE WELL STATUS		COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	☐ F	RACTURE TREAT	☐ NEW CONSTRUCTION
12/5/2012	OPERATOR CHANGE		LUG AND ABANDON	PLUG BACK
SPUD REPORT	✓ PRODUCTION START OR RESUME		ECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION		SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
				WATER DISPOSAL
DRILLING REPORT	L TUBING REPAIR		ENT OR FLARE	
Report Date:	WATER SHUTOFF		I TA STATUS EXTENSION	APD EXTENSION
	WILDCAT WELL DETERMINATION	C	OTHER	OTHER:
This	completed operations. Clearly she well had first gas sales	on 12/	5/12.	Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY December 12, 2012
NAME (PLEASE PRINT) Venessa Langmacher	<b>PHONE NU</b> 303 312-8172		TITLE Senior Permit Analyst	
SIGNATURE N/A			<b>DATE</b> 12/11/2012	

	STATE OF UTAH		FORM 9
	DEPARTMENT OF NATURAL RESOURCE DIVISION OF OIL, GAS, AND MIN		5.LEASE DESIGNATION AND SERIAL NUMBER: 2OG0005608
SUNDR	RY NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	oposals to drill new wells, significantly reenter plugged wells, or to drill horizon for such proposals.		7.UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Oil Well			8. WELL NAME and NUMBER: 16-12D-36 BTR
2. NAME OF OPERATOR: BILL BARRETT CORP			9. API NUMBER: 43013509800000
3. ADDRESS OF OPERATOR: 1099 18th Street Ste 2300	, Denver, CO, 80202	PHONE NUMBER: 303 312-8164 Ext	9. FIELD and POOL or WILDCAT: ALTAMONT
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0825 FSL 0260 FEL			COUNTY: DUCHESNE
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 2 Township: 03.0S Range: 06.0W Merid	ian: U	STATE: UTAH
11. CHEC	K APPROPRIATE BOXES TO INDICAT	TE NATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	☐ NEW CONSTRUCTION
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
✓ DRILLING REPORT Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
1/2/2013	WILDCAT WELL DETERMINATION	OTHER	OTHER:
/			,
	COMPLETED OPERATIONS. Clearly show a property of the complete		Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY January 03, 2013
NAME (PLEASE PRINT)	PHONE NUMB	ER TITLE	
Brady Riley	303 312-8115	Permit Analyst	
SIGNATURE N/A		<b>DATE</b> 1/2/2013	



API/UWI 13-013-5	50980		State/Provinc Utah	e County Duchesne	Field Name Black Tail Ridge	Well Status COMPLETION	Total Depth (ftKB)	Primary Job Type 0,555.0 Drilling & Completion
ime Lo			Otali	Ducheshe	Black Tall Kluge	COMPLETION	TO TO	5,555.0 Drilling & Completion
Start Time	Dur (hr)	End Time	Code	Category			Com	
06:00	6.00	12:00	PFRT	Perforating	SLB CBL GUNS A PHASING HSM. MI OPEN W AND CR	JGR/CCL DATED 11/1 RE 3-1/8" EXP WITH 3 G. RU SLB WITH 10K LU JELL. RIH TO CORREI -4 FORM 10,398' TO 1	BE. PU PERF GUNS F ATE JS AT '. RUN DOV ,099' WITH 48 HOLES	PH8) EHD, 36" PENT, 3 SPF ON 120* OR STAGE 1 INTO LUBE. 0 PSI WN AND PERF CR-5, CR-4A IN 16' NET. COULDN'T FIND
					PERF G		AND SHOT LAST PER	IS PULL UP. POOH AND MU 1' RF AT 10,099'. POOH AND
2:00	18.00	06:00	GOP	General Operations	WELL SI	HUT IN AND SECURE		
16-12	D-36 BT	R 12	2/2/201	12 06:00 - 12/3/2	2012 06:00			
API/UWI	-0000		State/Provinc	I '	Field Name	Well Status	Total Depth (ftKB)	Primary Job Type
43-013-5 Time Lo			Utah	Duchesne	Black Tail Ridge	COMPLETION	II.	0,555.0 Drilling & Completion
Start Time	Dur (hr)	End Time		Category			Com	UDO DDEO TECT WOLL (5::::
06:00	2.00	08:00	FRAC	Frac. Job		L 04:00. START AND F CTION, PARKING)	PRIME PUMPS. QC FLI	UIDS. PRES TEST. HSM (FALL
					NET. PRESSL OPEN W BREAK I PMP 390. FLUSH I SHUT DI STAGE I PERFS G CONT FI STAGE T STAGE T STAGE T STAGE T PSI STAGE T PSI STAGE T PSI STAGE T STAGE	JRE TEST LINES TO 9 /ELL W/ 330 PSI AT 05 DOWN 3330 PSI AT 9. 00 GAL 15% HCL ACIE /// 9910 GAL. 29.3 BPI OWN PMP. SURGE 3) FR PAD. STABLE RAT DPEN 25/48. R PAD. 70.0 BPM AT 6 TO .75 PPA 100# MES I. TO 1 PPA 20/40 CRC. TO 2 PPA 20/40 CRC. TO 3 PPA 20/40 CRC. TO 3 PPA 20/40 CRC. TO 3.5 PPA 20/40 CRC.	200 PSI. 6:20 8 BPM. 0 W/ 96 BIO BALLS FOI M AT 4217 PSI. ATTEM C. WAIT 15 MIN FOR BA E OF 69.9 BPM AT 629 6032 PSI. H. 69.7 BPM AT 6301 PSI 69.4 BPM AT 6301 PSI 69.4 BPM AT 5547 PSI C. 69.6 BPM AT 5241 PSI 69.4 BPM AT 5220 PSI C. 69.4 BPM AT 5220 PSI C. 674 MAX PRES 6516 PSI AVE PRES 5860 PSI	ALLS TO FALL. 15 PSI. ISIP 3263. FG .76. PSI. ON PERFS 69.7 BPM AT  . ON PERFS 69.3 BPM AT 6101  . ON PERFS 69.5 BPM AT 5251 SI. ON PERFS 69.6 BPM AT  . ON PERFS 69.4 BPM AT 5185
08:00	2.00	10:00	PFRT	Perforating	PERF ST AND EQ 9926'. RI CR-3 AN VERIFY	UALIZE 3300 PSI. OPI UN DOWN AND SET ( ID CR-4 FORM 9786'-1 ALL GUNS SHOT. TUI	1/2" 10K CBP AND GUI EN WELL AND RIH. CC CBP AT 10,069' WITH 3	



art Time	Dur (hr)	End Time	Code	Category	Com
art Time ::00	1.50 1.50	End Time 11:30	FRAC	Frac. Job	FRAC STG #2- CR-3 AND CR-4 PERFS 9785'-10,049' 45 HOLES IN 15' NET. PRESSURE TEST LINES TO 8800 PSI.  OPEN WELL W/ 2066 PSI AT 08:35 BREAK DOWN 4815 PSI AT 9.1 BPM. PMP 3900 GAL 15% HCL ACID W/ 90 BIO BALLS FOR DIVERSION. 10.4 BPM AT 3745 PSI. FLUSH W/ 9577 GAL. 30.3 BPM AT 4542 PSI. ATTEMPT BALL OUT. SHUT DOWN PMP. SURGE 3X. WAIT 15 MIN FOR BALLS TO FALL. STAGE FR PAD. STABLE RATE OF 70.1 BPM AT 5755 PSI. ISIP 3475. FG .79. PERFS OPEN 27/45. CONT FR PAD. 70.4 BPM AT 5088 PSI. STAGE TO .75 PPA 100# MESH. 70.3 BPM AT 5303 PSI. ON PERFS 70.2 BPM AT 5519 PSI. STAGE TO 1 PPA 20/40 CRC. 70.1 BPM AT 5460 PSI. ON PERFS 69.8 BPM AT 5031 PSI. STAGE TO 2 PPA 20/40 CRC. 69.8 BPM AT 5145 PSI. ON PERFS 69.8 BPM AT 5031 PSI. STAGE TO 3 PPA 20/40 CRC. 69.9 BPM AT 4970 PSI. ON PERFS 69.9 BPM AT 4872 PSI. STAGE TO 3.5 PPA 20/40 CRC. 69.8 BPM AT 4904 PSI. ON PERFS 70.2 BPM AT 4932 PSI. STAGE TO 4 PPA 20/40 CRC. 70.1 BPM AT 4904 PSI. ON PERFS 70.2 BPM AT 4932 PSI. STAGE TO 4 PPA 20/40 CRC. 70.1 BPM AT 4904 PSI. ON PERFS 70.2 BPM AT 5070 PSI. STAGE TO 4 PPA 20/40 CRC. 70.1 BPM AT 4956 PSI. ON PERFS 70.2 BPM AT 5070 PSI. STAGE TO 4 PPA 20/40 CRC. 70.1 BPM AT 4956 PSI. ON PERFS 70.2 BPM AT 5070 PSI. STAGE TO 4 PPA 20/40 CRC. 70.1 BPM AT 4956 PSI. ON PERFS 70.2 BPM AT 5070 PSI. WSI WITH 4130 PSI. TURN OVER TO WIRELINE.  ISIP 4150 PSI FG .86 MAX RATE 70.6 BPM AVE PRES 5131 PSI PMP 14,800# 100 MESH. 155,500# 20/40 CRC. (TOTAL PROP 155,500#) SLK WTR 74,561 GAL BWTR 3619 BBLS 250 LBS SCALE SORB 3
1:30	2.00	13:30	PFRT	Perforating	PERF STG #3- PU EXELLIS 5-1/2" 10K CBP AND GUNS FOR STAGE 3 INTO LUB AND EQUALIZE 3800 PSI. OPEN WELL AND RIH. CORRELATE TO SJ AT 9074'-9091'. RUN DOWN AND SET CBP AT 9777' WITH 3500 PSI. PULL UP AND PERF CF-2 AND CR-3 FORM 9494'-9755' WITH 45 HOLES IN 15' NET. POOH AND VERIFY ALL GUNS SHOT. TURN WELL OVER TO HES WITH 0 PSI.

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		End Time	Code	Category	Com
Start Time	Dur (hr)			Category	FRAC STG #3- CR-2 AND CR-3 PERFS 9494'-9755' 45 HOLES IN 15' NET.
3:30	1.50	15:00	FRAC	Frac. Job	
					PRESSURE TEST LINES TO 8900 PSI.
					OPEN WELL W/ -36 PSI AT 11:55
					BREAK DOWN 2881 PSI AT 9.7 BPM.
					PMP 3900 GAL 15% HCL ACID W/ 90 BIO BALLS FOR DIVERSION. 9.7 BPM AT 2755 PSI.
					FLUSH W/ 9400 GAL. 30.8 BPM AT 3729 PSI. ATTEMPT BALL OUT.
					SHUT DOWN PMP. SURGE 3X. WAIT 15 MIN FOR BALLS TO FALL.
					STAGE FR PAD. STABLE RATE OF 70.2 BPM AT 5660 PSI. ISIP 2807. FG .73.
					PERFS OPEN 27/45.
					CONT FR PAD. 72.1 BPM AT 5122 PSI.
					STAGE TO .75 PPA 100# MESH. 72.0 BPM AT 5476 PSI. ON PERFS 71.9 BPM AT 5613 PSI.
					STAGE TO 1 PPA 20/40 CRC. 71.0 BPM AT 5400 PSI. ON PERFS 71.9 BPM AT 5251
					PSI
					STAGE TO 2 PPA 20/40 CRC. 71.7 BPM AT 5165 PSI. ON PERFS 71.7 BPM AT 4912
					PSI.
					STAGE TO 3 PPA 20/40 CRC. 71.7 BPM AT 4910 PSI. ON PERFS 71.7 BPM AT 4917
					PSI.
			STAGE TO 3.5 PPA 20/40 CRC. 71.7 BPM AT 4962 PSI. ON PERFS 71.7 BPM AT 15280 PSI.		
					SHARP INCREASE IN NET PRESSURE AND SLOPE. CUT SAND AND FLUSH.
					FLUSH 70.1 BPM AT 5492 PSI. (GOT 65% OF DESIGN)
					WSI WITH 3400 PSI. TURN OVER TO WIRELINE.
					ISIP 3783 PSI FG .83
					MAX RATE 72.2 BPM MAX PRES 5700 PSI
					AVE RATE 71.9 BPM AVE PRES 5224 PSI
					PMP 13,700# 100 MESH. 90,300# 20/40 CRC. (TOTAL PROP
					104,000#)
					SLK WTR 63,169 GAL 20# HYBOR G (16) 62,004 GAL
					BWTR 3032 BBLS 250 LBS SCALE SORB 3
5:00	2.00	17:00	PFRT	Perforating	PERF STG #4- PU EXELLIS 5-1/2" 10K CBP AND GUNS FOR STAGE 4 INTO LUB
0.00	2.00	17.00		Gilorating	AND EQUALIZE 3300 PSI, OPEN WELL AND RIH, CORRELATE TO SJ AT 9074'-
					9091'. RUN DOWN AND SET CBP AT 9486' WITH 3000 PSI. PULL UP AND PERF
					WASATCH AND CR-2 FORM 9201'-9463' WITH 45 HOLES IN 15' NET. POOH AND
					VERIFY ALL GUNS SHOT. TURN WELL OVER TO HES WITH 1200 PSI.
					NOTE: -3' CORRELATION 9201' THRU 9463' FROM OH LOG.

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Time Lo	g					
Start Time	Dur (hr)	End Time	Code	Category		Com
17:00	. ,	18:30	FRAC	Frac. Job		FRAC STG #4- WASATCH AND CR-2 PERFS 9201'-9463' 45 HOLES IN 15' NET. PRESSURE TEST LINES TO 9000 PSI. OPEN WELL W/ 1097 PSI AT 14:55 BREAK DOWN 3220 PSI AT 9.5 BPM. PMP 3900 GAL 15% HCL ACID W/ 90 BIO BALLS FOR DIVERSION. 10.2 BPM AT 2752 PSI. FLUSH W/ 9348 GAL. 29.8 BPM AT 3418 PSI. ATTEMPT BALL OUT. SHUT DOWN PMP. SURGE 3X. WAIT 15 MIN FOR BALLS TO FALL. STAGE FR PAD. STABLE RATE OF 72.4 BPM AT 4140 PSI. ISIP 2491. FG .70. PERFS OPEN 41/45. CONT FR PAD. 71.9 BPM AT 4044 PSI. STAGE TO .75 PPA 100# MESH. 71.9 BPM AT 4213 PSI. ON PERFS 71.9 BPM AT 4368 PSI. STAGE TO 1 PPA 20/40 CRC. 71.6 BPM AT 4437 PSI. ON PERFS 71.8 BPM AT 4307 PSI STAGE TO 3 PPA 20/40 CRC. 71.6 BPM AT 4044 PSI. ON PERFS 71.9 BPM AT 3960 PSI. STAGE TO 3.5 PPA 20/40 CRC. 71.6 BPM AT 4044 PSI. ON PERFS 71.7 BPM AT 4011 PSI. STAGE TO 4 PPA 20/40 CRC. 71.5 BPM AT 3958 PSI. ON PERFS 71.7 BPM AT 4011 PSI. STAGE TO 4 PPA 20/40 CRC. 71.5 BPM AT 4099 PSI. ON PERFS 71.7 BPM AT 4011 PSI. STAGE TO 4 PPA 20/40 CRC. 71.5 BPM AT 4099 PSI. ON PERFS 71.7 BPM AT 4011 PSI. STAGE TO 3 PPA 20/40 CRC. 71.5 BPM AT 4099 PSI. ON PERFS 71.7 BPM AT 4011 PSI. STAGE TO 4 PPA 20/40 CRC. 71.5 BPM AT 4099 PSI. ON PERFS 71.7 BPM AT 4011 PSI. STAGE TO 4 PPA 20/40 CRC. 71.5 BPM AT 4099 PSI. ON PERFS 71.7 BPM AT 4011 PSI. STAGE TO 4 PPA 20/40 CRC. 71.5 BPM AT 4099 PSI. ON PERFS 71.7 BPM AT 4265 PSI. FLUSH 71.7 BPM AT 4895 PSI. WSI WITH 3150 PSI. TURN OVER TO WIRELINE.  ISIP 3222 PSI FG .78 MAX PRES 4448 PSI AVE PRES 4141 PSI PMP 13,300# 100 MESH. 140,100# 20/40 CRC. (TOTAL PROP 1053,400#) SLK WTR 76,168 GAL 20# HYBOR G (16) 59,191 GAL BWTR 3317 BBLS 250 LBS SCALE SORB 3
18:30	1.50	20:00	PFRT	Perforating		PERF STG #5- PU EXELLIS 5-1/2" 10K CBP AND GUNS FOR STAGE 5 INTO LUB AND EQUALIZE 2800 PSI. OPEN WELL AND RIH. CORRELATE TO SJ AT 9074'-9091'. RUN DOWN AND SET CBP AT 9155' WITH 2200 PSI. PULL UP AND PERF CR -1 AND WASATCH FORM 8893'-9131' WITH 45 HOLES IN 15' NET. POOH AND VERIFY ALL GUNS SHOT. END WITH 1200 PSI. POOH W/ WIRELINE. BLEED DOWN AND BLOW FLOW LINE DRY.  NOTE: -3' CORRELATION 9201' THRU 9463' FROM OH LOG.
20:00	10.00	06:00	LOCL	Lock Wellhead & Secure		WELL SHUT IN AND SECURE
16-12	D-36 BT	R 12	/3/201	12 06:00 - 12/4/20	012 06	6:00
API/UWI 43-013-5		S	tate/Province		Field Nam	
Time Lo	g			ı	•	
Start Time	Dur (hr)	End Time	Code	Category		Com

Time Lo	g				
Start Time	Dur (hr)	End Time	Code	Category	Com
06:00	1.00	07:00	SMTG	1 5	HES AOL 06:00. START AND PRIME UP PUMPS. PRES TEST TO 9000 PSI. HOLD SAFETY MTG. CHECK PRESSURES. SICP 0.

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g				
	End Time	Code	Category	Com
1.50	08:30	FRAC	Frac. Job	FRAC STG #5- CR-1 AND WASATCH PERFS 8893'-9131' 45 HOLES IN 15' NET. PRESSURE TEST LINES TO 9000 PSI. OPEN WELL W/ 0 PSI AT 07:10 BREAK DOWN 2635 PSI AT 9.7 BPM. PMP 3900 GAL 15% HCL ACID W/ 90 BIO BALLS FOR DIVERSION. 9.7 BPM AT 1925 PSI. FLUSH W/ 7663 GAL. 29.5 BPM AT 3095 PSI. ATTEMPT BALL OUT. SHUT DOWN PMP. SURGE 3X. WAIT 15 MIN FOR BALLS TO FALL. STAGE FR PAD. STABLE RATE OF 72.4 BPM AT 4407 PSI. ISIP 1959. FG .66. PERFS OPEN 28/45. CONT FR PAD. 72.6 BPM AT 4177 PSI. STAGE 100# MESH .75 PPA. PAD 72.6 BPM AT 4339 PSI. ON PERF 72.5 BPM AT 4402 PSI STAGE TO 1 PPA 20/40 CRC. 72.6 BPM AT 4243 PSI. ON PERF 72.5 BPM AT 4124 PSI. STAGE TO 2 PPA 20/40 CRC. 72.2 BPM AT 4014 PSI. ON PERFS 72.2 BPM AT 3888 PSI. STAGE TO 3.5 PPA 20/40 CRC. 72.1 BPM AT 3838 PSI. ON PERFS 72.2 BPM AT 3696 PSI. STAGE TO 3.5 PPA 20/40 CRC. 71.8 BPM AT 3670 PSI. ON PERFS 71.9 BPM AT 3660 PSI. STAGE TO 4 PPA 20/40 CRC. 71.9 BPM AT 3673 PSI. ON PERFS 71.9 BPM AT 3699 PSI. FLUSH 72.4 BPM AT 4105 PSI. WSI WITH 600 PSI. TURN OVER TO WIRELINE.  ISDP 2675 FG .73 MAX RATE 72.8 BPM AVE RATE 72.3 BPM AVE RATE 72.3 BPM AVE PRES 4068 PSI PMP 14,100# 100# MESH PROP )  SLK WTR 78,642 GAL 20# HYBOR G (16) 63,786 GAL BWTR 3485 BBLS
1.50	10:00	PFRT	Perforating	PERF STG #6- PU EXELLIS 5-1/2" 10K CBP AND GUNS FOR STAGE 6 INTO LUB AND EQUALIZE 2300 PSI. OPEN WELL AND RIH. CORRELATE TO SJ AT 7654'-7676'. RUN DOWN AND SET CBP AT 8886' WITH 1500 PSI. RUN DOWN AND PERF UTELAND BUTTE AND CR-1 FORM 8612'-8861' WITH 42 HOLES IN 14' NET. POOH AND VERIFY ALL GUNS SHOT. TURN WELL OVER TO HES WITH 800 PSI.  NOTE: -5' CORRELATION TO OH LOG.
	Dur (hr) 1.50		Dur (hr) End Time Code 1.50 08:30 FRAC	Dur (hr)   End Time   Code   Category   1.50   08:30   FRAC   Frac. Job

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Time Log	g				
Start Time	Dur (hr)	End Time	Code	Category	Com
10:00	1.50	11:30	FRAC	Frac. Job	FRAC STG #6- UTELAND BUTTE AND CR-1 PERFS 8612'-8861' 42 HOLES IN 14' NET. PRESSURE TEST LINES TO 8900 PSI. OPEN WELL W/ 489 PSI AT 10:10 BREAK DOWN 2660 PSI AT 9.7 BPM. PMP 3900 GAL 15% HCL ACID W/ 84 BIO BALLS FOR DIVERSION. 9.4 BPM AT 2107 PSI. FLUSH W/ 8465 GAL. 30.7 BPM AT 3006 PSI. ATTEMPT BALL OUT. SHUT DOWN PMP. SURGE 3X. WAIT 15 MIN FOR BALLS TO FALL. STAGE FR PAD. STABLE RATE OF 68.7 BPM AT 3648 PSI. ISIP 1840. FG .65. PERFS OPEN 35/42. CONT FR PAD. 72.9 BPM AT 3660 PSI. STAGE 100# MESH .75 PPA. PAD 71.9 BPM AT 3940 PSI. ON PERF 72.0 BPM AT 4000 PSI STAGE TO 1 PPA 20/40 CRC. 71.8 BPM AT 3930 PSI. ON PERFS 71.6 BPM AT 3821 PSI. STAGE TO 2 PPA 20/40 CRC. 71.5 BPM AT 3719 PSI. ON PERFS 71.6 BPM AT 3557 PSI. STAGE TO 3 PPA 20/40 CRC. 71.2 BPM AT 3495 PSI. ON PERFS 71.1 BPM AT 3401 PSI. STAGE TO 3.5 PPA 20/40 CRC. 71.2 BPM AT 3447 PSI. ON PERFS 71.1 BPM AT 3533 PSI. STAGE TO 4 PPA 20/40 CRC. 71.0 BPM AT 3583 PSI. ON PERFS 71.0 BPM AT 3600 PSI. FLUSH 72.0 BPM AT 4300 PSI. WSI WITH 2600 PSI. TURN OVER TO WIRELINE.  ISDP 3055 FG .79 MAX RATE 72.9 BPM MAX PRES 4309 PSI AVE RATE 71.7 BPM MAX PRES 4309 PSI AVE RATE 71.7 BPM AVE PRES 3685 PSI PMP 14,100# 100# MESH PNP) SLK WTR 75.290 GAL 20# HYBOR G (16) 65,883 GAL 250 LBS SCALE SORB 3 BWTR 3454 BBLS
11:30	1.50	13:00	PFRT	Perforating	PERF STG #7- PU EXELLIS 5-1/2" 10K CBP AND GUNS FOR STAGE 7 INTO LUB AND EQUALIZE 2200 PSI. OPEN WELL AND RIH. CORRELATE TO SJ AT 7654'-7676'. RUN DOWN AND SET CBP AT 8605' WITH 1800 PSI. RUN DOWN AND PERF CASTLE PEAK FORM 8346'-8582' WITH 45 HOLES IN 15' NET. POOH AND VERIFY ALL GUNS SHOT. TURN WELL OVER TO HES WITH 0 PSI.
					NOTE: -6' CORRELATION TO OH LOG.

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Time Lo	g										
Start Time	Dur (hr)	End Time	Code	Category		ED		- A17	Com	-0.1NL 4-1N/	
13:00	1.50	14:30	FRAC	Frac. Job		PRESSUR OPEN WE BREAK D PMP 3900 PSI.	RE TEST LINES T ELL W/ 0 PSI AT 1 OWN 1275 PSI A <sup>-</sup> ) GAL 15% HCL A	O 8900 PS 13:10 T 9.7 BPM. CID W/ 90	BIO BALLS FOR DIVE	ERSION. 9.7 BPM AT 870	
						SHUT DO STAGE F PERFS O	WN PMP. SURGE	E 3X. WAIT RATE OF 72	36 PSI. ATTEMPT BA 15 MIN FOR BALLS <sup>1</sup> 2.3 BPM AT 3669 PSI.	ΓO FALL.	
										ON PERF 71.7 BPM AT	
						PSI.				PERF 71.7 BPM AT 3185	
						PSI.				PERFS 71.5 BPM AT 2989 PERFS 71.4 BPM AT 2834	
						PSI.	J 3 PPA 20/40 CF	KC. / 1.5 DF	7W AT 2952 PSI. ON F	ERFS / 1.4 DPW AT 2034	
		STAGE TO 3.5 PPA 20/40 CRC. 71.1 BPM AT 2759 PSI. ON PERFS 71.4 BP 2835 PSI.									
						PSI.	3 4 PPA 20/40 CF 8 BPM AT 3760 P		7M AT 2843 PSI. ON F	PERFS 71.2 BPM AT 2914	
							1 1900 PSI. TURN		WIRELINE.		
						ISDP 196	6 E 72.8 BPM	FG.	67 PRES 3811 PSI		
							E 72.0 BPM E 71.7 BPM		PRES 3231 PSI		
						PMP 12,4 PROP)	90# 100# MESH		141,640# 20/40 C	RC. (TOTAL 154,130#	
						SLK WTR	77,337 GAL SCALE SORB 3	20#	HYBOR G (16) 63,906 BWTR 3481 BBLS		
14:30		14:30	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Wireline		SETTING	KIII DILIC DILE	VELLIS E	1/2" 10K CDD AND SE	ETTING TOOL INTO LUB	
14.50		14.30	VVEVVIC	Wileline		AND EQUALIZE 400 PSI. OPEN WELL AND RIH. CORRELATE TO SJ AT 7654'-7676'. RUN DOWN AND SET KILL PLUG AT 8300' WITH 0 PSI. BECAME STUCK ON PLUG, DID NOT SHEAR. WORK WIRELINE TO GET FREE FROM PLUG. POOH.					
14:30		14:30	GOP	General Operations		WELL SHUT IN AND SECURE. RDMO HES AND SLB. BLOW FLOW LINES DRY.					
16-12	D-36 BT	R 12	2/4/201	2 06:00 - 12/5/20	012 06	:00					
API/UWI 43-013-5			tate/Provinc Jtah	e County Duchesne	Field Name Black Ta	e ail Ridge	Well Status COMPLETION		Total Depth (ftKB) 10,555.0	Primary Job Type Drilling & Completion	
Start Time	Dur (hr)	End Time	Code	Category					Com		
06:00	, ,	07:00	CTRL	Crew Travel		CREW TF	AVEL.		COM		
07:00	1.00	08:00	RMOV	Rig Move		ROAD RIG	G FROM 5-20-46	TO LOCATI	ON.		
08:00	3.00	11:00	SRIG	Rig Up/Down		SPOT AND RUSU. CHECK PRES. ND FRAC VALVES. INSTALL HANGER W/ BULL PLUG. NU BOP. NU HYDRIL. RU FLOOR. HOOK UP FRONTIER AND PRES TEST STACK AND VALVES 400 LOW/ 4000 HIGH. PULL HANGER.					
11:00		12:00	GOP	General Operations					BIT, POBS, 1-JT 2-7/8		
12:00		16:00	RUTB	Run Tubing					3300' WITH #262. LD	1-JT.	
16:00		17:00	GOP	General Operations			SWIVEL. RU PUN				
17:00	13.00		LOCL	Lock Wellhead & Secure	240.00		UT IN AND SECU	IKE.			
	D-36 BT			12 06:00 - 12/6/20					T	15:	
43-013-5			tate/Provinc Jtah	County Duchesne	Field Name Black Ta	e ail Ridge	Well Status COMPLETION		Total Depth (ftKB) 10,555.0	Primary Job Type Dirilling & Completion	
Start Time	Dur (hr)	End Time	Code	Category					Com		
06:00		07:00	CTRL	Crew Travel CREW TRAVEL. HOLD SAFETY MEETING.							



Time Log				2 .	
Start Time	Dur (hr)	End Time	Code	Category	Com
07:00	8.50	15:30	DOPG	Drill Out Plugs	R/U POWER SWIVEL. BREAK CIRC. TEST CIRC EQUIPMENT TO 1500 PSI, HELD GOOD.
					BREAK CIRC. D/O KILL PLUG @ 8300', LOST CIRC, WELL ON VACUUM.
					SWIVEL IN HOLE. BREAK CIRC. D/O CBP @ 8605'. LOST CIRC, WELL ON VACUUM.
					SWIVEL IN HOLE. BREAK CIRC. D/O CBP @ 8886', LOST CIRC, WELL ON VACUUM.
					SWIVEL IN HOLE. BREAK CIRC. D/O CBP @ 9155'. FCP- 150 ON 28/64 CHOKE.
					SWIVEL IN HOLE. D/O CBP @ 9486'. FCP- 250 ON 28/64 CHOKE.
					SWIVEL IN HOLE. D/O CBP @ 9780'. FCP- 900 ON 28/64 CHOKE.
					SWIVEL IN HOLE. D/O CBP @ 10,069'. FCP- 1250 ON 28/64 CHOKE.
					SWIVEL IN HOLE. TAG SAND @ 10,300'. C/O TO FLOAT COLLAR @ 10,452. D/O F/C & C/O CMT TO 10,524'. CIRC WELL CLEAN FOR 1 HR. R/D SWIVEL. FCP- 550.
15:30	1.50	17:00	PULT	Pull Tubing	POOH L/D 2-7/8 TBG TO LANDING DEPTH @ 8338'. FCP- 450. SWIFN. DRAIN UP CIRC EQUIPMENT. SDFN.
17:00	1.00	18:00	CTRL	Crew Travel	CREW TRAVEL.
8:00	12.00	06:00	LOCL	Lock Wellhead & Secure	WELL SHUT IN & SECURE.

#### 16-12D-36 BTR 12/6/2012 06:00 - 12/7/2012 06:00

API/UWI State/Pro	ovince County	Field Name	Well Status	Total Depth (ftKB)	Primary Job Type
43-013-50980 Utah	Duchesne	Black Tail Ridge	COMPLETION	10,555.0	Drilling & Completion

Time Lo	g				
Start Time	Dur (hr)	End Time	Code	Category	Com
06:00	1.00	07:00	CTRL	Crew Travel	CREW TRAVEL HOLD SAFETY MEETING.
07:00	3.50	10:30	IWHD	Install Wellhead	SITP- 0. SICP- 1250. LAND TBG @ 8338'. 262 JTS TOTAL IN HOLE. N/D BOP. N/U WELLHEAD. DROP BALL & PUMPED BIT OFF @ 1700 PSI. TBG ON VACUUM. R/U TBG TO SALES LINE. TURN OVER TO FLOW BACK.
10:30	2.50	13:00	SRIG	Rig Up/Down	R/D RIG & EQUIPMENT. CLEAN LOCATION. ROAD RIG TO NABORS YARD.
13:00	17.00	06:00	LOCL	Lock Wellhead & Secure	WELL SECURE.

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Form 3160-4

# UNITED STATES

FORM APPROVED

(August 2007)						THE IN MANA	TERIOR GEMENT								004-0137 y 31, 2010
	WELL (	COMPL	ETION C	R RE	CO	MPLET	ION REF	PORT	AND LOG	ì			ase Serial 1 OG000560		
la. Type o	f Well 🔯	Oil Well	☐ Gas \	Well		Ory 🔲	Other					<u></u>			r Tribe Name
b. Турс o	f Completion	⊠ N Othe	lew Well er	□ Wot	k Ov	er 🔲 I	Deepen	☐ Plug	g Back 🔲	Diff. R	esvr.	7. Unit or CA Agreement Name and No.			
2. Name of	Operator					Contact:	JULIE WE	RR				0 T	NT	4 337	-11 N.
BILL B	ARRETT CO				webb		ettcorp.cor	n	<i>C</i> 1 1	· <del></del>		1	ease Name a 6-12D-36 I	BTR	EII NO.
	DENVER,	CO 802	202				Ph: 3	303-312		a code)		9. A	PI Well No.	•	43-013-50980
	of Well (Rep						•		)*				Field and Po		Exploratory
	nce SESE wood interval r					•	2939 W L	on				11. 5	Sec., T., R., r Area Se	M., or	Block and Survey 3S R6W Mer UBM
	orod interval r	- 700E	897		3 L U	HOTEL i /	:16	A 1				12. (	County or P	arish	13. State
At total		SE /20F8	SL 987FEL	ite T.D.	Pero	- 12Y	<u> 145,</u>		C1-4-1				UCHESNI	Ξ	UT
14. Date Sp 09/28/2	2012			/04/201		neu		🗍 D &	Completed A ⊠ Read 5/2012	dy to Pi	rod.	17. 1		DF, KI I7 GL	B, RT, GL)*
18. Total D	Depth:	MD TVD	10555 10489		19.	Plug Back	T.D.:	MD TVD	10452 10387		20. Dej	oth Bri	dge Plug Se		MD TVD
21. Type E MUD, 0	lectric & Oth	er Mecha	nical Logs R	սո (Տսեւ	nit co	opy of cacl	p)		22.		vell core	d?	⊠ No	□ Yes	(Submit analysis)
WOD, C	JDL										OST run? ional Su	rvey?	⊠ No ⊠ No □ No	☐ Yes ☑ Yes	s (Submit analysis) s (Submit analysis)
23. Casing a	nd Liner Reco	ord (Repo	rt all strings	set in w	ell)			***************************************			·				
Hole Size	Size/G	rade	Wt. (#/ft.)	To <sub>l</sub> (MI		Bottom (MD)	Stage Co		No. of Sk Type of Co		Şlurry (BB		Cement 7	Гор*	Amount Pulled
26.000		COND	65.0		0		30	80						0	
12,250		25 J-55	36.0		0	401		4011		935		450		0	
8.750	5.50	0 P-110	17.0		0	1055	25	10540		1665		581		3724	
24. Tubing															
Size 2.875	Depth Set (IV	1D) P 8339	acker Depth	(MD)	Siz	ze De	pth Set (MI	D)   P	acker Depth (	MD)	Size	Do	pth Set (M)	D)	Packer Depth (MD)
	ng Intervals	-				1 2	6. Perforati	on Reco	ord	L					
F	onnation		Тор		Bot	ttom	Per	forated	Interval		Size	ì	Vo. Holes		Perf. Status
<u>A)</u>	GREEN R	IVER		8346		9084			8346 TO 90	084	0.4	40	132	OPE	
B)	WASA	TCH		9100		10398	<del></del>		9100 TO 103	398	0.4	40	183	OPE	Ν
C) D),					_					+-		_		<u> </u>	
	racture, Treat	ment, Cer	nent Squeeze	E, Etc.						<u></u>				L	<u> </u>
	Depth Interva							Aı	mount and Ty	e of M	aterial		*		RECEIVED
e	83	46 TO 90	084 GREEN	RIVER:	SEE	TREATME	NT STAGES	\$ 5-7							
	910	0 TO 103	398 WASAT	CH: SEE	TRE	ATMENT	STAGES 1-4	4	<del></del>					·····	DEC 2 5 2012
		***************************************		·						· ····	······································			711/7	)EOU our
28. Product	ion - Interval	A	· · · · · · · · · · · · · · · · · · ·					******						JI V. (	DF OIL, GAS & MINING
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL		Gas MCF	Water BBL	Oil Gr Corr.		Gas		Product	ion Method		
12/05/2012	12/11/2012	24		666.0	E	1248.0	517.0	соп.	52.0	Gravity			FLOV	VS FRO	OM WELL
Choke Size	Tbg. Press. Flwg. 1000	Csg. Press.	24 Hr. Rate	Oil BBL		Gas MCF	Water BBL	Gas:0	ii e	Well St	atus				
26/64	SI 1000	2250.0		666		1248	517	Ratio	1873	P	OW				
	ction - Interva	l B													
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL		Gas MCF	Water BBL	Oil Gr Corr.		Gas Gravity		Product	ion Method		
Choke Size	Tbg. Press.	Csg.	24 Hr.	Oil		Gas	Water	Gas:O		Well St	atus				
J.20	Flwg. SI	Press.	Rate	BBL	ľ	MCF	BBL	Ratio							

28h Produ	ction - Interva	ı.c							•	<del> </del>		
Date First	Test	Hours	Test	Oil	Gas	Water	Oil Gravity	- 10		T		
Produced	Date	Tested	Production	BBL	MCF	BBL.	Corr. API	Gas Gravit	у	Production Method		
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well S	itatus			
28c. Produ	ction - Interva	l D		***********	·	<del></del>	•		~			
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravit	у	Production Method		
Choke Size	Tbg. Press. Flwg. St	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well S	itatus			
29. Dispos SOLD	ition of Gas(S	old, used fo	or fuel, vent	ed, etc.)					•			
30. Summa	ry of Porous	Zones (Incl	ude Aquife	rs):					31. For	mation (Log) Marke	ers	
tests, ir	all important z scluding depti overies.	ones of por interval te	osity and co sted, cushio	ontents there on used, time	of: Cored in tool open,	tervals and a flowing and s	ll drill-stem but-in pressures	3				
	Formation		Тор	Bottom		Description	s, Contents, etc.			Name		Top Meas. Depth
TOC w	onal remarks ( //as calculate Attached is t	d by CBL.	ČBĽ maile	ed dúe to fil	e size. Cor as on 12/5	nductor was /2012.	cemented with	1	MA DO BL, CA UT	EEN RIVER HOGANY UGLAS CREEK ACK SHALE STLE PEAK ELAND BUTTE ISATCH		4594 5312 7559 8213 8343 8631 9091 10555
	enclosed attac											······································
	trical/Mechar dry Notice for			- /		. Geologic F	-		DST Rep Other;	oort 4	4. Direction	al Survey
34. I hereb	v certify that t	he foregoir	g and attac	hed informat	ion is come	lete and com	act as datamaina	d from all	ormilahi-	records (see attache	d inst	
	, ******			onic Submi	ssion #1683	66 Verified	by the BLM WARATION, sent	ell Inform	ation Sv		eg instructioi	ns):
Name (	please print)	JULIE WE	BB_		·		Title PI	ERMIT AN	ALYST			
Signati	$\Delta$		lSubm <b>i</b> ssi		bk	7		2/21/2012				
Title 18 U. of the Unit	S.C. Section 1 ed States any	001 and Ti	tle 43 U.S.0 ous or fradi	C. Section 12 Ilent stateme	212, make it ents or repre	a crime for a sentations as	ny person know to any matter w	ingly and ithin its ju	willfully risdiction	to make to any depa	ortment or ag	ency

## 16-12D-36 BTR Completion Report Continued\*

44.	ACID, FRACTURE, TREATME	ENT, CEMENT SQUEEZE, ETC.	(cont.)								
	AMOUNT AND TYPE OF MATERIAL										
<u>Stage</u>	BBLS Slurry	lbs 100 Common Mesh	lbs 20/40 White Sand								
1	3,440	13,800	134,300								
2	3,664	14,800	155,500								
3	3,142	13,700	90,300								
4	3,481	13,300	104,100								
5	3,661	14,100	149,900								
6	3,631	14,100	150,200								
7	3,622	12,490	141,640								

<sup>\*</sup>Depth intervals for frac information same as perforation record intervals.

RECEIVED
DEC 2 5 2012

DIV. OF OIL, GAS & MINING

## **BILL BARRETT CORPORATION**

UTAH (DUCHESNE COUNTY) SEC. 12 T3S R6W U.S.B. & M. (NAD 83) #16-12D-36 BTR ORIGINAL WELLBORE

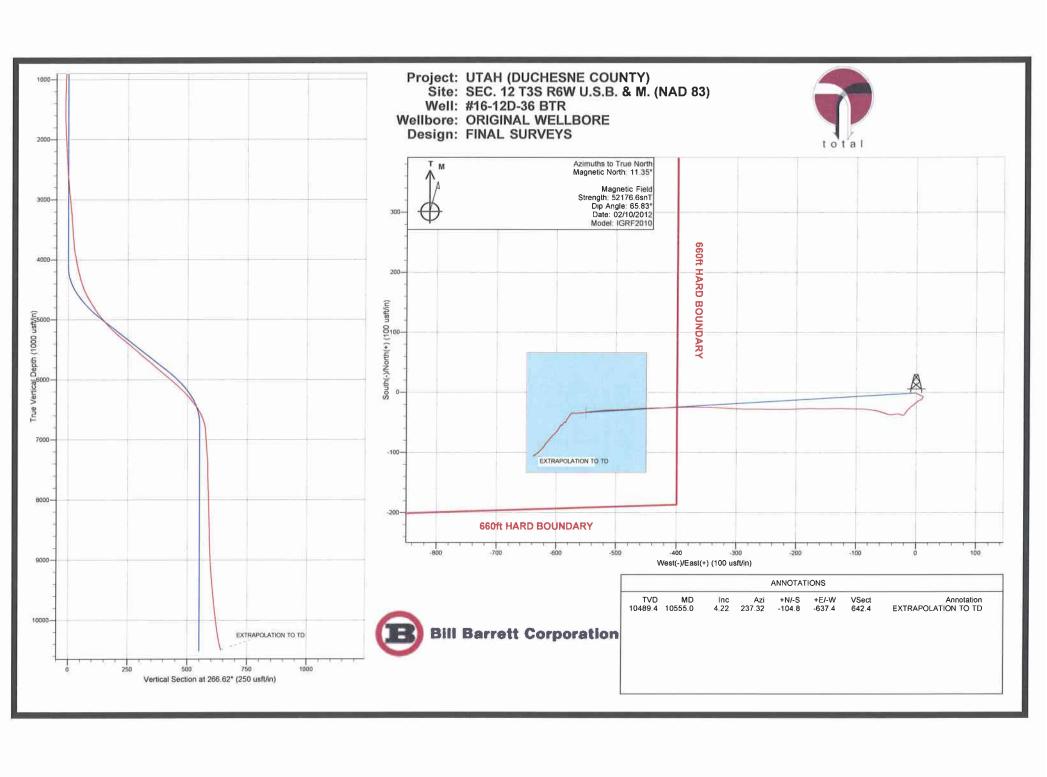
**04 November, 2012** 

**Survey: FINAL SURVEYS** 

DEC 2 5 2012

DIV. OF OIL, GAS & MINING







Company: Project: Site:

Well:

**BILL BARRETT CORPORATION** UTAH (DUCHESNE COUNTY)

SEC. 12 T3S R6W U.S.B. & M. (NAD #16-12D-36 BTR

Wellbore: ORIGINAL WELLBORE Design: FINAL SURVEYS

Local Co-ordinate Reference:

TVD Reference: MD Reference:

North Reference:

**Survey Calculation Method:** Database:

Well #16-12D-36 BTR

KB-EST @ 5962.0usft (Original Well Elev) KB-EST @ 5962.0usft (Original Well Elev)

Minimum Curvature

EDM 5000.1 Single User Db

**Project** 

UTAH (DUCHESNE COUNTY)

Map System: Geo Datum: Map Zone:

US State Plane 1983 North American Datum 1983

Utah Central Zone

**System Datum:** 

Mean Sea Level

Using geodetic scale factor

Site

SEC. 12 T3S R6W U.S.B. & M. (NAD 83)

Site Position: From:

Lat/Long

Northing: Easting:

7,253,899.39 usft 1,918,791.22 usft

Latitude:

40° 13' 46.459 N

**Position Uncertainty:** 

Slot Radius:

Longitude:

110° 30' 10.580 W

0.0 usft

13-3/16"

**Grid Convergence:** 

0.64

Well

#16-12D-36 BTR

+E/-W

+N/-S **Well Position** 

0.0 usft 0.0 usft

Northing: Easting:

7,253,899,39 usfl 1,918,791,22 usfl Latitude:

40° 13' 46.459 N

**Position Uncertainty** 

0.0 usft

Wellhead Elevation:

usf

Longitude: **Ground Level:**  110° 30' 10.580 W 5,945.0 usft

Wellbore

Magnetics

**Model Name** 

Sample Date

Declination

**Dip Angle** 

Field Strength

**IGRF2010** 

**ORIGINAL WELLBORE** 

02/10/2012

11.35

65.83

52.177

Design

FINAL SURVEYS

**Audit Notes:** 

Version:

1.0

Phase:

**ACTUAL** 

Tie On Depth:

0.0

Vertical Section:

Depth From (TVD) (usft)

+N/-S (usft) +E/-W (usft) Direction

0.0

0.0

(°) 266.62

**Survey Program** Date 04/11/2012

To

From (usft) (usft)

Survey (Wellbore)

**Tool Name** 

Description

188.0

10,555.0 FINAL SURVEYS (ORIGINAL WELLBOR! MWD

MWD - Standard

#### Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Bulld Rate (°/100usft)	Turn Rate (*/100usft)
0.0	0.00	0.00	0.0	5,962.0	0.0	0.0	0.0	0.00	0.00	0.00
188.0	0.66	89.86	188.0	5,774.0	0.0	1.1	-1.1	0.35	0.35	0.00
219.0	0.13	114.09	219.0	5,743.0	0.0	1.3	-1.3	1.76	-1.71	78.16
281.0	0.40	141.34	281.0	5,681.0	-0.2	1.5	-1.5	0.47	0.44	43.95
343.0	0.35	154.44	343.0	5,619.0	-0.5	1.7	-1.7	0.16	-0.08	21.13
402.0	0.18	150.83	402.0	5,560.0	-0.8	1.8	-1.8	0.29	-0.29	-6.12
462.0	0.53	141.87	462.0	5,500.0	-1.1	2.0	-2.0	0.59	0.58	-14.93
524.0	0.75	123.50	524.0	5,438.0	-1.5	2.6	-2.5	0.48	0.35	-29.63
584.0	0.83	105.83	584.0	5,378.0	-1.9	3.3	-3.2	0.43	0.13	-29.45
645.0	0.92	111.90	645.0	5,317.0	-2.2	4.2	-4.1	0.21	0.15	9.95
705.0	0.92	121.56	705.0	5,257.0	-2.6	5.0	-4.9	0.26	0.00	16.10
766.0	0.75	106.89	766.0	5,196.0	-3.0	5.8	-5.7	0.45	-0.28	-24.05
828.0	0.79	119.81	828.0	5,134.0	-3.3	6.6	-6.4	0.29	0.06	20.84



Company: Project: Site: Well:

Wellbore:

Design:

BILL BARRETT CORPORATION UTAH (DUCHESNE COUNTY) SEC. 12 T3S R6W U.S.B. & M. (NAD MD Reference: #16-12D-36 BTR

ORIGINAL WELLBORE FINAL SURVEYS

Local Co-ordinate Reference:

TVD Reference:

North Reference: Survey Calculation Method:

Database:

Well #16-12D-36 BTR

KB-EST @ 5962.0usft (Original Well Elev) KB-EST @ 5962.0usft (Original Well Elev)

Minimum Curvature

EDM 5000.1 Single User Db

4,092.0 3.16 255.86 4,091.0 1,871.0 -35.6 -37.0 39.0 0.81 0.76 -5.44	urvey							tari ya da ta ya m		1 (1 et al. ) (1 (110) (12 et al. ) 1 (1 (12 et al. ) (1 (12	Andrew Green Control
Dopt	Measured			Vertical	Subsea			Vertical	Doglad	D.IIA	Tuin
880.0 0.92 109.00 889.9 5.072.1 3.7 7.4 7.2 0.33 0.21 -17.44				Depth	Depth			Section	Rate	Rate	Rate
983.0 1.14 115.32 982.9 5.009.1 -4.1 8.5 -8.2 0.39 0.35 10.03 1.000.0 0.26 101.35 1.079.9 4.822.1 -4.7 8.9 -8.0 0.39 0.35 10.03 1.000.0 0.26 101.35 1.079.9 4.822.1 -4.7 8.9 -8.0 0.39 0.35 2.106 12.000.0 0.26 101.35 1.079.9 4.822.1 -4.7 8.9 -8.0 0.39 0.39 0.35 2.106 12.000.0 0.26 112.66 12.00.9 4.785.1 -4.2 10.8 -8.0 0.39 0.39 0.35 2.106 12.000.0 0.74 115.62 12.69.9 4.892.1 -5.5 11.5 -11.1 0.20 0.19 4.38 1.200.0 0.74 115.62 12.69.9 4.892.1 -5.5 11.5 -11.1 0.20 0.19 4.38 1.334.0 0.18 12.19.2 1.333.9 4.028.1 -5.7 11.9 -11.5 0.20 0.19 4.38 1.334.0 0.18 12.19.2 1.333.9 4.028.1 -5.7 11.9 -11.5 0.20 0.19 4.38 1.340.0 0.13 15.40 0.19.9 4.865.1 -5.7 11.9 -11.5 0.20 0.19 4.38 1.387.0 0.13 158.40 0.19.9 4.865.1 -5.7 11.9 -11.5 0.20 0.29 0.29 1.44 1.584.0 0.0 0.31 158.40 0.19.29 4.865.1 -5.0 12.1 -11.7 0.19 0.08 65.34 1.587.0 0.62 2.15.34 1.588.9 4.375.1 -7.1 12.0 -11.6 0.59 0.29 0.29 1.40 1.554.0 0.57 0.024 1.523.9 4.483.1 -5.0 12.1 -11.7 0.19 0.05 0.29 0.29 1.40 1.554.0 0.57 0.024 1.523.9 4.483.1 -5.7 1.1 12.7 -11.3 0.23 0.08 20.33 1.851.0 0.64 2.05.1 1.569.9 4.375.1 -7.1 12.7 -11.4 -10.9 0.15 0.03 1.317.1 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.	890.0	- Add of Maria Sanda Carl	<ul> <li>of declars diffled.</li> </ul>						연하님은 보게.		
1.017.0											
1,080.0											
1,143.0 0.48 119.46 1,142.9 4,819.1 4.9 10.2 9.9 0.39 0.39 0.35 88,75 1,207.0 0.62 112.86 1,206.9 4,755.1 5.2 10.8 -10.5 0.24 0.22 1.031 1,207.0 0.74 115.62 1,206.9 4,755.1 5.5 11.5 -11.1 0.20 0.40 0.22 10.31 1,334.0 0.18 12.19.2 1,333.9 4,692.1 5.5 11.5 -11.1 0.20 0.19 4.31 1,334.0 0.18 12.19.2 1,333.9 4,692.1 5.5 11.5 -11.1 0.20 0.19 4.31 1,337.0 0.13 163.40 1,308.9 4,565.1 5.8 12.0 -11.7 0.19 0.08 0.8 -0.87 9.84 1,337.0 0.13 163.40 1,308.9 4,565.1 5.8 12.0 -11.7 0.19 0.08 0.65.24 1,450.0 0.57 0.20 1,4 1,523.9 4,438.1 -6.5 12.0 -11.7 0.29 0.29 1,047 1,523.9 4,438.1 -6.5 12.0 -11.7 0.29 0.29 1,047 1,523.9 4,438.1 -6.5 12.0 -11.7 0.29 0.29 1,047 1,523.9 4,438.1 -6.5 12.0 -11.3 0.23 0.08 20.35 1,651.0 0.64 20.61 1,680.9 4,375.1 -7.1 11.7 -11.3 0.23 0.08 20.35 1,651.0 0.64 20.61 1,680.9 4,375.1 -7.7 11.4 -10.9 0.15 0.03 -1.3.7 1,775.0 0.70 19.79 1,774.9 4,247.1 -8.4 11.1 -10.6 0.19 0.09 -14.56 0.1 1,774.0 0.70 19.79 1,774.9 4,247.1 -8.4 11.1 -10.6 0.19 0.09 -14.56 0.1 1,906.0 0.70 229.87 1,905.9 4,866.1 -10.3 9.9 1.0 0.3 9.7 0.41 0.41 2.37 1,906.0 0.70 229.87 1,905.9 4,866.1 -10.3 9.9 1.0 0.3 9.7 0.41 0.41 2.37 0.20 2.8 1.6 1.9 0.0 0.8 20.29 3.892.1 -11.4 8.3 1-6.5 0.41 0.35 15.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1											
1,207.0 0.62 112.86 1,206.9 4,755.1 -5.2 10.8 -10.5 0.24 0.22 -10.31 1,270.0 0.74 115.62 1,209.9 4,692.1 -5.5 11.5 -11.1 0.20 0.19 4.38 1,337.0 0.18 121.92 1,333.9 4,628.1 -5.5 11.5 -11.1 0.20 0.19 4.38 1,337.0 0.13 168.40 1,396.9 4,565.1 -5.7 11.9 -11.6 0.88 -0.87 9,84 1,460.0 0.31 168.40 1,396.9 4,565.1 -5.7 11.9 -11.6 0.58 0.88 -0.87 9,84 1,460.0 0.31 168.40 1,396.9 4,565.1 -5.7 12.0 -11.7 0.19 -0.08 65.84 1,460.0 0.57 1,622.34 1,523.9 4,565.1 -5.8 12.0 -11.7 0.19 -0.08 65.84 1,567.0 0.62 215.34 1,523.9 4,565.1 -6.5 12.0 -11.6 0.59 0.41 59.47 1,587.0 0.62 215.34 1,523.9 4,565.1 -6.5 12.0 -11.6 0.59 0.41 59.47 1,775.0 0.62 215.34 1,560.9 4,371.1 -7.7 11.4 -10.9 0.15 0.59 0.41 59.47 1,779.0 0.83 210.16 1,778.9 4,183.1 -9.1 10.7 -10.2 0.33 0.20 0.9 14.55 1,779.0 0.83 210.16 1,778.9 4,183.1 -9.1 10.7 -10.2 0.33 0.20 19.84 1,842.0 0.57 211.65 1,841.9 4,120.1 -9.8 10.3 -9.7 0.41 0.41 2.37 1,960.0 0.70 229.67 1,965.9 4,055.1 -10.3 9.9 -9.2 0.37 0.20 28.16 1,969.0 0.92 239.25 1,968.9 3,993.1 -10.8 9.1 -8.5 0.41 0.35 15.2 1,093.0 0.88 236.26 2,032.9 3,929.1 -11.4 8.3 -7.6 0.10 -0.06 -467 2,203.0 0.88 236.26 2,032.9 3,929.1 -11.4 8.3 -7.6 0.10 -0.06 -467 2,223.0 0.89 23.80 23.80 23.80 23.80 1.1 -1.9 7.4 -6.7 0.35 0.21 7.0 2,200.0 0.97 252.17 2,159.9 3,866.1 -11.9 7.4 -6.7 0.35 0.21 7.0 2,200.0 0.97 252.17 2,159.9 3,866.1 -11.9 7.4 -6.7 0.35 0.21 7.0 2,223.0 0.88 234.15 2,283.0 1.05 248.83 2,222.8 3,793.2 -12.6 5.3 -4.5 0.16 0.13 -5.3 3,200.0 0.10 1,238.0 2,341.8 2,241.8 3,242.2 -1.3 1,3 -3.6 0.47 -0.27 2,244.2 2,223.0 1.05 248.83 2,224.8 3,793.9 2,12.6 5.3 -4.5 0.16 0.13 -5.3 3,200.0 1.01 233.80 2,341.8 3,242.2 -1.3 1,43 2.9 -2.0 0.86 0.33 2.03 2,287.0 0.88 234.15 2,268.8 3,675.2 -13.1 4.3 2.9 -2.0 0.86 0.33 2.03 2,287.0 0.88 234.15 2,268.8 3,675.2 -13.1 4.3 2.9 -2.0 0.86 0.33 2.03 2,287.0 0.88 238.72 2,476.8 3,885.2 -14.7 2.3 -14.6 0.4 0.6 0.4 4.0 0.4 0.6 4.6 0.4 0.6 0.4 4.0 0.4 0.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0											
1,270.0 0,74 115.62 1,269.9 4,692.1 -5.5 11.5 -11.1 0,20 0,19 4,838 1,334.0 0,18 121.92 1,333.9 4,628.1 -5.7 11.9 -11.6 0,88 0,87 9,84 1,397.0 0,13 163.40 1,396.9 4,656.5 1 -5.8 12.0 -11.7 0,19 0,08 65.84 1,490.0 0,31 163.40 1,396.9 4,656.5 1 -5.8 12.0 -11.7 0,19 0,08 65.84 1,490.0 0,31 163.20 1,499.9 4,502.1 -6.0 12.1 -11.7 0,29 0,29 0,29 1,40 1,524.0 0,57 20.24 1,523.9 4,480.1 -6.5 12.0 -11.6 0,59 0,41 594.7 1,557.0 0,62 215.34 1,566.9 4,375.1 -7.1 11.7 -11.3 0,23 0,08 20.53 1,521.0 0,64 2,66.9 1,749.9 4,247.1 -8.4 11.1 -10.6 0,19 0,09 -14.56 1,779.0 0,70 197.59 1,774.9 4,247.1 -8.4 11.1 -10.6 0,19 0,09 -14.56 1,779.0 0,83 210.16 1,778.9 4,183.1 -9.1 10.7 -10.2 0,33 0,20 19.64 1,842.0 0,57 211.65 1,841.9 4,120.1 -9.8 10.3 -9.7 0,41 -0.41 2,37 1,906.0 0,70 22.967 1,905.9 4,056.1 -10.3 9.9 -9.2 0,37 0,20 28.16 1,996.0 0,70 22.896.7 1,905.9 4,056.1 -10.3 9.9 -9.2 0,37 0,20 28.16 1,996.0 0,70 22.896.7 1,905.9 4,056.1 -10.3 9.9 -9.2 0,37 0,20 28.16 1,996.0 0,70 22.896.7 1,905.9 4,056.1 -10.3 9.9 -9.2 0,37 0,20 28.16 1,996.0 0,97 22.967 1,905.9 4,056.1 -10.3 9.9 -9.2 0,37 0,20 28.16 1,996.0 0,97 22.967 1,905.9 4,056.1 -10.3 9.9 -9.2 0,37 0,20 28.16 1,996.0 0,97 22.967 1,905.9 4,056.1 -10.3 9.9 -9.2 0,37 0,20 28.16 1,996.0 0,50 2,50 2,50 2,50 2,50 2,50 2,50 2,5											
1,334.0 0.18 12192 1,333.9 4,628.1 5.7 11.9 -11.8 0.88 -0.87 9.84 1,397.0 0.13 163.40 1,396.9 4,656.1 5.8 12.0 -11.17 0.19 -0.08 65.84 1,490.0 0.31 163.40 1,396.9 4,656.1 5.8 12.0 -11.17 0.19 -0.08 65.84 1,490.0 0.31 164.28 1,409.9 4,502.1 6.0 12.1 -11.7 0.29 0.29 1.40 1,524.0 0.57 20.234 1,523.9 4,438.1 6.5 12.0 -11.6 0.59 0.41 59.47 1,557.0 0.62 215.34 1,568.9 4,375.1 7.1 11.7 -11.3 0.22 0.08 20.63 1,651.0 0.64 206.91 1,650.9 4,311.1 -7.7 11.4 1-0.9 0.15 0.03 13.17 1,715.0 0.70 197.59 1,714.9 4,247.1 8.4 11.1 -10.6 0.19 0.09 -14.56 1,779.0 0.83 210.16 1,778.9 4,183.1 9.1 10.7 10.2 0.33 0.20 19.84 1,842.0 0.57 211.65 1,841.9 4,120.1 9.8 10.3 9.7 4.1 0.41 2.37 1,906.0 0.70 229.67 1,905.9 4,056.1 -10.3 9.9 9.9 2.2 0.37 0.20 28.16 1,969.0 0.52 239.25 1,968.9 3,993.1 -10.8 9.1 9.9 9.2 0.37 0.20 28.16 1,969.0 0.92 239.25 1,968.9 3,993.1 -10.8 9.1 8.5 0.41 0.35 15.21 2,096.0 1.01 246.89 2,095.9 3,868.1 -11.9 7.4 6.7 0.35 0.11 0.06 4.67 2,096.0 1.01 246.89 2,095.9 3,868.1 -11.9 7.4 6.7 0.35 0.10 0.06 4.67 2,096.0 1.01 246.89 2,095.9 3,868.1 -11.9 7.4 6.7 0.35 0.21 17.02 2,230 1.05 248.83 2,222.8 3,739.2 1.26 5.3 4.5 0.16 0.15 0.06 8.11 0.2 2,237.0 0.88 234.15 2,226.8 3,755.2 1.22 6.3 -5.6 0.15 0.06 8.11 0.2 2,237.0 0.88 234.15 2,226.8 3,755.2 1.22 6.3 -5.6 0.15 0.06 8.11 0.2 2,237.0 0.88 234.15 2,226.8 3,865.2 1.14.9 2.9 2.0 0.86 0.83 20.33 2,477.0 0.83 238.72 2,476.8 3,485.2 1.14.9 2.9 2.0 0.86 0.83 20.33 2,477.0 0.48 238.72 2,476.8 3,485.2 1.14.9 2.9 2.0 0.86 0.83 20.33 2,477.0 0.83 238.72 2,476.8 3,485.2 1.14.7 2.3 -1.4 0.64 0.56 24.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2											
1,397.0         0.13         163.40         1,396.9         4,565.1         -5.8         12.0         -11.7         0.19         -0.08         66.524           1,480.0         0.37         164.28         1,459.9         4,592.1         -6.0         12.1         -11.7         0.29         0.29         1.40           1,587.0         0.62         2215.34         1,589.9         4,375.1         -7.1         11.7         -11.6         0.59         0.21         0.68         208.3           1,651.0         0.64         206.91         1,650.9         4,311.1         -7.7         11.4         -10.9         0.15         0.03         -13.17           1,779.0         0.83         210.16         1,779.9         4,311.1         -7.7         11.4         -10.9         0.15         0.03         1.317         1.715.0         0.70         11.56         1.841.9         4,120.1         -8.4         11.1         -10.6         0.19         0.09         -14.56         1.458.1         1.7         10.0         0.15         0.03         1.317.1         1.759.0         1.468.1         1.7         1.1         -10.9         0.9         0.2         0.33         0.20         1.868.0         0.41         0.35 <td></td> <td>n 18</td> <td>121 02</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>i</td>		n 18	121 02								i
1,460.0 0.31 16428 1,459.9 4,502.1 -6.0 12.1 -11.7 0.28 0.29 0.41 1,524.0 0.57 202.34 1,523.9 4,438.1 -6.5 12.0 -11.6 0.59 0.41 594.7 1,587.0 0.62 215.34 1,586.9 4,375.1 -7.1 11.7 -11.3 0.23 0.08 20.63 1,681.0 0.64 206.91 1,650.9 4,311.1 -7.7 11.4 -10.9 0.15 0.03 -13.17 1,715.0 0.70 197.59 1,714.9 4,247.1 -6.4 11.1 -10.6 0.19 0.09 -14.56 1,779.0 0.83 210.16 1,778.9 4,183.1 -9.1 10.7 -10.2 0.33 0.20 19.64 1,842.0 0.57 211.65 1,841.9 4,120.1 -9.8 10.3 -9.7 0.41 0.41 2.37 1,906.0 0.70 229.57 1,905.9 4,056.1 -10.3 9.9 -9.2 0.37 0.20 28.16 1,969.0 0.70 229.57 1,905.9 4,056.1 -10.3 9.9 -9.2 0.37 0.20 28.16 1,969.0 0.92 239.25 1,968.9 3,989.1 -11.4 8.3 -7.6 0.10 0.06 4.52 2,033.0 0.88 236.26 2,032.9 3,829.1 -11.4 8.3 -7.6 0.10 0.06 4.52 2,222.0 1.05 248.83 2,222.8 3,739.2 -12.6 5.3 -5.6 0.15 0.21 1,002 2,223.0 1.05 248.83 2,222.8 3,739.2 -12.6 5.3 -5.6 0.15 0.21 1,002 2,223.0 1.05 248.83 2,222.8 3,739.2 -12.6 5.3 -5.6 0.15 0.04 0.35 -5.20 2,235.0 1.01 238.80 2,348.8 3,812.2 -13.1 4.3 -3.6 0.47 0.27 2,224 2,350.0 1.01 233.80 2,348.8 3,812.2 -13.7 3,5 -2.7 0.21 0.21 0.25 2,441.0 0.48 22.79 2,415.8 3,845.2 -14.7 2.3 -1.4 0.64 0.56 28.48 2,541.0 0.48 22.79 2,475.8 3,485.2 -14.7 2.3 -1.4 0.64 0.56 28.48 2,541.0 1.23 22.185 2,540.8 3,552.2 -16.4 0.4 0.4 0.6 0.44 0.21 1,716 2,561.0 1.23 22.185 2,540.8 3,552.2 -16.4 0.4 0.4 0.6 0.44 0.21 1,716 2,561.0 1.63 23.80 2,248.8 3,552.2 -16.4 0.4 0.4 0.6 0.44 0.21 1,716 2,561.0 1.63 23.80 2,248.8 3,552.2 -16.4 0.4 0.4 0.6 0.4 0.2 0.5 0.4 0.5 0.2 0.5 0.5 0.4 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.6 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5											
1,524.0         0.57         202.34         1,523.9         4,438.1         -6.5         12.0         -11.6         0.59         0.41         59.47           1,587.0         0.62         215.34         1,586.9         4,375.1         -7.1         11.7         -11.3         0.23         0.08         20.83           1,651.0         0.64         206.91         1,565.9         4,311.1         -7.7         11.4         -10.9         0.15         0.03         -13.17           1,779.0         0.83         210.16         1,779.9         4,181.1         -9.7         0.1         -10.6         0.19         0.09         -14.56           1,960.0         0.57         211.65         1,841.9         4,120.1         -9.8         10.3         -9.7         0.41         0.41         2.31           1,969.0         0.92         239.25         1,968.9         3,893.1         -10.8         9.1         -8.5         0.41         0.36         15.21           2,033.0         0.88         236.26         2,032.9         3,892.1         -11.4         -8.3         -7.6         0.10         -0.6         -4.67           2,035.0         1.01         248.83         2,069.9         3,866.1 <td></td> <td></td> <td></td> <td></td> <td>4 502 1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>					4 502 1						
1,687.0         0,62         215.34         1,586.9         4,375.1         -7.1         11.7         -11.3         0,23         0,08         20,63           1,651.0         0,64         206.91         1,650.9         4,311.1         -7.7         11.4         -10.9         0,03         1.31.7           1,775.0         0,83         210.16         1,778.9         4,247.1         -8.4         11.1         -10.8         0.19         0.09         -14.56           1,779.0         0.83         210.16         1,778.9         4,183.1         -9.1         10.7         -10.2         0.33         0.20         19.64           1,969.0         0.70         229.67         1,965.9         4,056.1         -10.3         9.9         -9.2         0.37         0.20         28.16           2,096.0         0.70         229.267         1,968.9         3,999.1         -10.8         5.5         0.41         0.35         15.21           2,093.0         0.88         236.26         2,032.9         3,929.1         -11.4         8.3         -7.6         0.10         -0.6         -4.7           2,096.0         1.01         246.98         3,806.1         -12.2         6.3         -5.6											
1851.0       0.64       206.91       1.850.9       4,311.1       -7.7       11.4       -10.9       0.15       0.03       -13.17         1.7715.0       0.83       210.16       1,778.9       1,778.9       1,778.9       1,778.9       1,778.9       1,778.9       1,778.9       1,778.9       1,778.9       1,181.9       4,120.1       -8.8       10.3       -9.7       0.41       -0.41       2.23       1,966.0       0.70       229.67       2,1165       1,841.9       4,120.1       -8.8       10.3       -9.7       0.41       -0.41       2.23       1,966.0       0.70       229.67       1,968.9       3,993.1       -10.8       9.1       -8.5       0.41       0.35       15.21       2.28.16       2,093.0       0.88       236.26       2,032.9       3,993.1       -10.8       9.1       -8.5       0.41       0.35       15.21       2.223.0       0.10       246.98       2,095.9       3,866.1       -11.9       7.4       -6.7       0.35       0.21       17.02       2,235.0       0.021       17.02       2,248.8       3,675.2       -13.1       4.3       -3.6       0.47       -0.27       -22.94       2.0       0.86       -0.83       2-2.350.0       1.01       233.80	1,587.0										
1,775.0 0.70 197.59 1,714.9 4,247.1 -8.4 11.1 -10.6 0.19 0.09 1-14.56 1.779.9 0.83 210.16 1,778.9 4,183.1 -9.1 10.7 -10.2 0.33 0.20 19.04 1.84.0 0.57 211.65 1.841.9 4,183.1 -9.1 10.7 -10.2 0.33 0.20 19.04 1.84.0 0.57 211.65 1.841.9 4,183.1 -9.1 10.7 -10.2 0.33 0.20 19.04 1.84.0 0.57 211.65 1.841.9 4,120.1 -9.8 10.3 -9.7 0.41 -0.41 2.37 1.906.0 0.70 229.67 1,905.9 4,056.1 -10.3 9.9 -9.2 0.37 0.20 28.16 1.909.0 0.92 239.25 1,905.9 4,056.1 -10.3 9.9 -9.2 0.37 0.20 28.16 1.909.0 0.92 239.25 1.968.9 3,993.1 -10.8 9.1 -8.5 0.41 0.35 -15.21 0.033 0.0 0.88 236.26 2,032.9 3,993.1 -11.4 8.3 -7.6 0.10 -0.06 -4.67 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	1.651.0	0.64	206 91	1 650 9	4 311 1	-77	11 4				
1,779.0 0,83 210.16 1,778.9 4,183.1 -9.1 10.7 -10.2 0.33 0.20 19.04 1.842.0 0.57 211.65 1,841.9 4,120.1 -9.8 10.3 -9.7 0.41 -0.41 2.37 1.906.0 0.70 229.67 1,905.9 4,056.1 -10.3 9.9 -9.2 0.37 0.20 28.16 1.906.0 0.92 239.25 1,968.9 3,993.1 -10.8 9.1 -8.5 0.41 0.35 15.21 2.033.0 0.88 236.26 2.032.9 3,929.1 -11.4 8.3 -7.6 0.10 -0.06 4.67 2.096.0 1.01 246.98 2.095.9 3,896.1 -11.9 7.4 -6.7 0.35 0.21 17.02 2.160.0 0.97 252.17 2.159.9 3,806.1 -11.9 7.4 -6.7 0.35 0.21 17.02 2.230 1.05 248.83 2.222.8 3,739.2 -12.6 5.3 -4.5 0.16 0.13 -5.30 2.287.0 0.88 234.15 2.286.8 3,675.2 -13.1 4.3 -3.6 0.47 -0.27 -22.94 2.350.0 1.01 233.80 2.349.8 3,612.2 -13.7 3.5 -2.7 0.21 0.21 0.22 2.24 2.350.0 1.01 233.80 2.349.8 3,612.2 -13.7 3.5 -2.7 0.21 0.21 0.25 2.24 2.477.0 0.83 238.72 2.476.8 3,485.2 -14.7 2.3 -1.4 0.44 0.66 0.83 2.247.0 0.83 2.28.2 2.476.8 3,485.2 -14.7 2.3 -1.4 0.44 0.66 0.83 2.25.4 0.5 2.25.4 0.1 1.23 221.85 2.540.8 3,221.6 1.5 -15.4 1.5 -0.5 0.78 0.62 2.65.8 2.604.0 1.36 232.6 2.603.8 3,295.2 -17.4 -0.9 1.9 0.50 0.49 -3.08 2.731.0 1.34 2254.5 2.730.7 3.213.3 -18.6 -2.1 3.2 0.56 0.42 0.29 0.29 1.27 0.29 0.29 0.27 1.02 1.29 0.20 0.86 0.44 0.21 17.16 0.26.57 0.1 1.03 238.0 2.793.0 1.03 238.20 2.656.7 3,105.3 -20.4 -8.6 0.0 0.29 0.29 0.29 1.27 0.29 0.29 0.29 0.29 0.29 0.29 0.29 0.29											
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2,794.0       1.45       237.40       2,793.7       3,168.3       -19.5       -3.3       4.5       0.49       0.17       18.97         2,857.0       1.63       238.20       2,856.7       3,105.3       -20.4       -4.8       6.0       0.29       0.29       1.27         2,921.0       1.76       235.56       2,920.7       3,041.3       -21.4       -6.4       7.6       0.24       0.20       4.12         2,984.0       1.98       225.71       2,983.6       2,978.4       -22.7       -7.9       9.3       0.62       0.35       -15.63         3,047.0       1.67       223.61       3,046.6       2,915.4       -24.2       -9.4       10.8       0.50       -0.49       -3.33         3,111.0       2.07       226.24       3,110.6       2,851.4       -25.6       -10.8       12.3       0.64       0.62       4.11         3,174.0       1.89       226.15       3,173.5       2,788.5       -27.2       -12.4       14.0       0.29       -0.29       -0.14         3,238.0       1.71       216.31       3,237.5       2,724.5       -28.7       -13.7       15.4       0.56       -0.28       -15.37 <t< td=""><td>•</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	•										
2,857.0											
2,921.0       1.76       235.56       2,920.7       3,041.3       -21.4       -6.4       7.6       0.24       0.20       -4.12         2,984.0       1.98       225.71       2,983.6       2,978.4       -22.7       -7.9       9.3       0.62       0.35       -15.63         3,047.0       1.67       223.61       3,046.6       2,915.4       -24.2       -9.4       10.8       0.50       -0.49       -3.33         3,111.0       2.07       226.24       3,110.6       2,851.4       -25.6       -10.8       12.3       0.64       0.62       4.11         3,174.0       1.89       226.15       3,173.5       2,788.5       -27.2       -12.4       14.0       0.29       -0.29       -0.14         3,238.0       1.71       216.31       3,237.5       2,724.5       -28.7       -13.7       15.4       0.56       -0.28       -15.37         3,301.0       1.93       214.47       3,300.5       2,661.5       -30.3       -14.9       16.6       0.36       0.35       -2.92         3,428.0       1.36       218.77       3,427.4       2,534.6       -33.5       -17.1       19.0       0.90       -0.84       11.16											
2,984.0       1.98       225.71       2,983.6       2,978.4       -22.7       -7.9       9.3       0.62       0.35       -15.63         3,047.0       1.67       223.61       3,046.6       2,915.4       -24.2       -9.4       10.8       0.50       -0.49       -3.33         3,111.0       2.07       226.24       3,110.6       2,851.4       -25.6       -10.8       12.3       0.64       0.62       4.11         3,174.0       1.89       226.15       3,173.5       2,788.5       -27.2       -12.4       14.0       0.29       -0.29       -0.14         3,238.0       1.71       216.31       3,237.5       2,724.5       -28.7       -13.7       15.4       0.56       -0.28       -15.37         3,301.0       1.93       214.47       3,300.5       2,661.5       -30.3       -14.9       16.6       0.36       0.35       -2.92         3,428.0       1.89       211.74       3,364.4       2,597.6       -32.1       -16.0       17.9       0.16       -0.06       -4.27         3,492.0       1.41       224.75       3,491.4       2,470.6       -34.7       -18.1       20.1       0.24       0.08       9.34	2 921 0	1 76	235 56	2 920 7	3 041 3		6.4				
3,047.0				,							
3,111.0       2.07       226.24       3,110.6       2,851.4       -25.6       -10.8       12.3       0.64       0.62       4.11         3,174.0       1.89       226.15       3,173.5       2,788.5       -27.2       -12.4       14.0       0.29       -0.29       -0.14         3,238.0       1.71       216.31       3,237.5       2,724.5       -28.7       -13.7       15.4       0.56       -0.28       -15.37         3,301.0       1.93       214.47       3,300.5       2,661.5       -30.3       -14.9       16.6       0.36       0.35       -2.92         3,365.0       1.89       211.74       3,364.4       2,597.6       -32.1       -16.0       17.9       0.16       -0.06       -4.27         3,428.0       1.36       218.77       3,427.4       2,534.6       -33.5       -17.1       19.0       0.90       -0.84       11.16         3,492.0       1.41       224.75       3,491.4       2,470.6       -35.7       -18.1       20.1       0.24       0.08       9.34         3,555.0       1.32       227.47       3,554.4       2,407.6       -35.7       -19.2       21.2       0.18       -0.14       4.32 <tr< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr<>											
3,174.0       1.89       226.15       3,173.5       2,788.5       -27.2       -12.4       14.0       0.29       -0.29       -0.14         3,238.0       1.71       216.31       3,237.5       2,724.5       -28.7       -13.7       15.4       0.56       -0.28       -15.37         3,301.0       1.93       214.47       3,300.5       2,661.5       -30.3       -14.9       16.6       0.36       0.35       -2.92         3,365.0       1.89       211.74       3,364.4       2,597.6       -32.1       -16.0       17.9       0.16       -0.06       -4.27         3,428.0       1.36       218.77       3,427.4       2,534.6       -33.5       -17.1       19.0       0.90       -0.84       11.16         3,492.0       1.41       224.75       3,491.4       2,470.6       -34.7       -18.1       20.1       0.24       0.08       9.34         3,555.0       1.32       227.47       3,554.4       2,407.6       -35.7       -19.2       21.2       0.18       -0.14       4.32         3,619.0       1.14       237.67       3,618.4       2,343.6       -36.6       -20.3       22.4       0.44       -0.28       15.94      <											
3,238.0       1.71       216.31       3,237.5       2,724.5       -28.7       -13.7       15.4       0.56       -0.28       -15.37         3,301.0       1.93       214.47       3,300.5       2,661.5       -30.3       -14.9       16.6       0.36       0.35       -2.92         3,365.0       1.89       211.74       3,364.4       2,597.6       -32.1       -16.0       17.9       0.16       -0.06       -4.27         3,428.0       1.36       218.77       3,427.4       2,534.6       -33.5       -17.1       19.0       0.90       -0.84       11.16         3,492.0       1.41       224.75       3,491.4       2,470.6       -34.7       -18.1       20.1       0.24       0.08       9.34         3,555.0       1.32       227.47       3,554.4       2,407.6       -35.7       -19.2       21.2       0.18       -0.14       4.32         3,619.0       1.14       237.67       3,618.4       2,343.6       -36.6       -20.3       22.4       0.44       -0.28       15.94         3,682.0       1.27       264.12       3,681.4       2,280.6       -37.0       -21.5       23.6       0.90       0.21       41.98 <t< td=""><td>3,174.0</td><td>1.89</td><td>226.15</td><td>3,173.5</td><td>2,788.5</td><td>-27.2</td><td></td><td></td><td></td><td></td><td></td></t<>	3,174.0	1.89	226.15	3,173.5	2,788.5	-27.2					
3,301.0       1.93       214.47       3,300.5       2,661.5       -30.3       -14.9       16.6       0.36       0.35       -2.92         3,365.0       1.89       211.74       3,364.4       2,597.6       -32.1       -16.0       17.9       0.16       -0.06       -4.27         3,428.0       1.36       218.77       3,427.4       2,534.6       -33.5       -17.1       19.0       0.90       -0.84       11.16         3,492.0       1.41       224.75       3,491.4       2,470.6       -34.7       -18.1       20.1       0.24       0.08       9.34         3,555.0       1.32       227.47       3,554.4       2,407.6       -35.7       -19.2       21.2       0.18       -0.14       4.32         3,619.0       1.14       237.67       3,618.4       2,343.6       -36.6       -20.3       22.4       0.44       -0.28       15.94         3,682.0       1.27       264.12       3,681.4       2,280.6       -37.0       -21.5       23.6       0.90       0.21       41.98         3,739.0       1.45       289.96       3,738.3       2,223.7       -36.8       -22.8       24.9       1.11       0.32       45.33	3.238.0	1.71	216.31	3 237 5	2 724 5	-28 7	-13 7	15.4	0.56		
3,365.0       1.89       211.74       3,364.4       2,597.6       -32.1       -16.0       17.9       0.16       -0.06       -4.27         3,428.0       1.36       218.77       3,427.4       2,534.6       -33.5       -17.1       19.0       0.90       -0.84       11.16         3,492.0       1.41       224.75       3,491.4       2,470.6       -34.7       -18.1       20.1       0.24       0.08       9.34         3,555.0       1.32       227.47       3,554.4       2,407.6       -35.7       -19.2       21.2       0.18       -0.14       4.32         3,619.0       1.14       237.67       3,618.4       2,343.6       -36.6       -20.3       22.4       0.44       -0.28       15.94         3,682.0       1.27       264.12       3,681.4       2,280.6       -37.0       -21.5       23.6       0.90       0.21       41.98         3,739.0       1.45       289.96       3,738.3       2,223.7       -36.8       -22.8       24.9       1.11       0.32       45.33         3,802.0       1.76       292.95       3,801.3       2,160.7       -36.1       -24.4       26.5       0.51       0.49       4.75	•										
3,428.0       1.36       218.77       3,427.4       2,534.6       -33.5       -17.1       19.0       0.90       -0.84       11.16         3,492.0       1.41       224.75       3,491.4       2,470.6       -34.7       -18.1       20.1       0.24       0.08       9,34         3,555.0       1.32       227.47       3,554.4       2,407.6       -35.7       -19.2       21.2       0.18       -0.14       4.32         3,619.0       1.14       237.67       3,618.4       2,343.6       -36.6       -20.3       22.4       0.44       -0.28       15.94         3,682.0       1.27       264.12       3,681.4       2,280.6       -37.0       -21.5       23.6       0.90       0.21       41.98         3,739.0       1.45       289.96       3,738.3       2,223.7       -36.8       -22.8       24.9       1.11       0.32       45.33         3,802.0       1.76       292.95       3,801.3       2,160.7       -36.1       -24.4       26.5       0.51       0.49       4.75         3,865.0       2.64       291.81       3,864.3       2,097.7       -35.2       -26.7       28.7       1.40       1.40       -1.81	,										
3,492.0       1.41       224.75       3,491.4       2,470.6       -34.7       -18.1       20.1       0.24       0.08       9,34         3,555.0       1.32       227.47       3,554.4       2,407.6       -35.7       -19.2       21.2       0.18       -0.14       4.32         3,619.0       1.14       237.67       3,618.4       2,343.6       -36.6       -20.3       22.4       0.44       -0.28       15.94         3,682.0       1.27       264.12       3,681.4       2,280.6       -37.0       -21.5       23.6       0.90       0.21       41.98         3,739.0       1.45       289.96       3,738.3       2,223.7       -36.8       -22.8       24.9       1.11       0.32       45.33         3,802.0       1.76       292.95       3,801.3       2,160.7       -36.1       -24.4       26.5       0.51       0.49       4.75         3,865.0       2.64       291.81       3,864.3       2,097.7       -35.2       -26.7       28.7       1.40       1.40       -1.81         3,929.0       2.46       273.09       3,928.2       2,033.8       -34.6       -29.4       31.4       1.32       -0.28       -29.25	3,428.0		218.77								
3,555.0       1.32       227.47       3,554.4       2,407.6       -35.7       -19.2       21.2       0.18       -0.14       4.32         3,619.0       1.14       237.67       3,618.4       2,343.6       -36.6       -20.3       22.4       0.44       -0.28       15.94         3,682.0       1.27       264.12       3,681.4       2,280.6       -37.0       -21.5       23.6       0.90       0.21       41.98         3,739.0       1.45       289.96       3,738.3       2,223.7       -36.8       -22.8       24.9       1.11       0.32       45.33         3,802.0       1.76       292.95       3,801.3       2,160.7       -36.1       -24.4       26.5       0.51       0.49       4.75         3,865.0       2.64       291.81       3,864.3       2,097.7       -35.2       -26.7       28.7       1.40       1.40       -1.81         3,929.0       2.46       273.09       3,928.2       2,033.8       -34.6       -29.4       31.4       1.32       -0.28       -29.25         3,952.0       2.50       269.84       3,951.2       2,010.8       -34.6       -30.4       32.4       0.64       0.17       -14.13 <tr< td=""><td>3,492.0</td><td>1.41</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr<>	3,492.0	1.41									
3,619.0       1.14       237.67       3,618.4       2,343.6       -36.6       -20.3       22.4       0.44       -0.28       15.94         3,682.0       1.27       264.12       3,681.4       2,280.6       -37.0       -21.5       23.6       0.90       0.21       41.98         3,739.0       1.45       289.96       3,738.3       2,223.7       -36.8       -22.8       24.9       1.11       0.32       45.33         3,802.0       1.76       292.95       3,801.3       2,160.7       -36.1       -24.4       26.5       0.51       0.49       4.75         3,865.0       2.64       291.81       3,864.3       2,097.7       -35.2       -26.7       28.7       1.40       1.40       -1.81         3,929.0       2.46       273.09       3,928.2       2,033.8       -34.6       -29.4       31.4       1.32       -0.28       -29.25         3,952.0       2.50       269.84       3,951.2       2,010.8       -34.6       -30.4       32.4       0.64       0.17       -14.13         4,029.0       2.68       259.29       4,028.1       1,933.9       -34.9       -33.8       35.8       0.66       0.23       -13.70 <t< td=""><td>3.555.0</td><td>1.32</td><td>227 47</td><td>3 554 4</td><td>2 407 6</td><td>-35.7</td><td>-10.2</td><td>21.2</td><td></td><td></td><td></td></t<>	3.555.0	1.32	227 47	3 554 4	2 407 6	-35.7	-10.2	21.2			
3,682.0       1.27       264.12       3,681.4       2,280.6       -37.0       -21.5       23.6       0.90       0.21       41.98         3,739.0       1.45       289.96       3,738.3       2,223.7       -36.8       -22.8       24.9       1.11       0.32       45.33         3,802.0       1.76       292.95       3,801.3       2,160.7       -36.1       -24.4       26.5       0.51       0.49       4.75         3,865.0       2.64       291.81       3,864.3       2,097.7       -35.2       -26.7       28.7       1.40       1.40       -1.81         3,929.0       2.46       273.09       3,928.2       2,033.8       -34.6       -29.4       31.4       1.32       -0.28       -29.25         3,952.0       2.50       269.84       3,951.2       2,010.8       -34.6       -30.4       32.4       0.64       0.17       -14.13         4,029.0       2.68       259.29       4,028.1       1,933.9       -34.9       -33.8       35.8       0.66       0.23       -13.70         4,092.0       3.16       255.86       4,091.0       1,871.0       -35.6       -37.0       39.0       0.81       0.76       -5.44 <td></td>											
3,739.0       1.45       289.96       3,738.3       2,223.7       -36.8       -22.8       24.9       1.11       0.32       45.33         3,802.0       1.76       292.95       3,801.3       2,160.7       -36.1       -24.4       26.5       0.51       0.49       4.75         3,865.0       2.64       291.81       3,864.3       2,097.7       -35.2       -26.7       28.7       1.40       1.40       -1.81         3,929.0       2.46       273.09       3,928.2       2,033.8       -34.6       -29.4       31.4       1.32       -0.28       -29.25         3,952.0       2.50       269.84       3,951.2       2,010.8       -34.6       -30.4       32.4       0.64       0.17       -14.13         4,029.0       2.68       259.29       4,028.1       1,933.9       -34.9       -33.8       35.8       0.66       0.23       -13.70         4,092.0       3.16       255.86       4,091.0       1,871.0       -35.6       -37.0       39.0       0.81       0.76       -5.44											
3,802.0       1.76       292.95       3,801.3       2,160.7       -36.1       -24.4       26.5       0.51       0.49       4.75         3,865.0       2.64       291.81       3,864.3       2,097.7       -35.2       -26.7       28.7       1.40       1.40       -1.81         3,929.0       2.46       273.09       3,928.2       2,033.8       -34.6       -29.4       31.4       1.32       -0.28       -29.25         3,952.0       2.50       269.84       3,951.2       2,010.8       -34.6       -30.4       32.4       0.64       0.17       -14.13         4,029.0       2.68       259.29       4,028.1       1,933.9       -34.9       -33.8       35.8       0.66       0.23       -13.70         4,092.0       3.16       255.86       4,091.0       1,871.0       -35.6       -37.0       39.0       0.81       0.76       -5.44	3,739.0	1.45	289.96	3,738.3							
3,929.0       2.46       273.09       3,928.2       2,033.8       -34.6       -29.4       31.4       1.32       -0.28       -29.25         3,952.0       2.50       269.84       3,951.2       2,010.8       -34.6       -30.4       32.4       0.64       0.17       -14.13         4,029.0       2.68       259.29       4,028.1       1,933.9       -34.9       -33.8       35.8       0.66       0.23       -13.70         4,092.0       3.16       255.86       4,091.0       1,871.0       -35.6       -37.0       39.0       0.81       0.76       -5.44	3,802.0	1.76	292.95	3,801.3							
3,929.0       2.46       273.09       3,928.2       2,033.8       -34.6       -29.4       31.4       1.32       -0.28       -29.25         3,952.0       2.50       269.84       3,951.2       2,010.8       -34.6       -30.4       32.4       0.64       0.17       -14.13         4,029.0       2.68       259.29       4,028.1       1,933.9       -34.9       -33.8       35.8       0.66       0.23       -13.70         4,092.0       3.16       255.86       4,091.0       1,871.0       -35.6       -37.0       39.0       0.81       0.76       -5.44	3,865.0	2.64	291.81	3,864.3	2.097.7	-35.2	-26.7	28.7	1 40	1 40	-1 81
3,952.0     2.50     269.84     3,951.2     2,010.8     -34.6     -30.4     32.4     0.64     0.17     -14.13       4,029.0     2.68     259.29     4,028.1     1,933.9     -34.9     -33.8     35.8     0.66     0.23     -13.70       4,092.0     3.16     255.86     4,091.0     1,871.0     -35.6     -37.0     39.0     0.81     0.76     -5.44											
4,029.0     2.68     259.29     4,028.1     1,933.9     -34.9     -33.8     35.8     0.66     0.23     -13.70       4,092.0     3.16     255.86     4,091.0     1,871.0     -35.6     -37.0     39.0     0.81     0.76     -5.44											
4,092.0 3.16 255.86 4,091.0 1,871.0 -35.6 -37.0 39.0 0.81 0.76 -5.44		2.68	259.29	4,028.1							-13.70
4156 0 3.08 265.53 4.154.9 1.807.1 -36.2 -40.4 42.5 0.92 0.42 45.44	4,092.0	3.16	255.86	4,091.0	1,871.0	-35.6	-37.0				
15 17 15 15 15 15 15 15 15 15 15 15 15 15 15	4,156.0	3.08	265.53	4,154.9	1,807.1	-36.2	-40.4	42.5	0.83	-0.12	15.11



Company: Project: Site: Well: Wellbore:

Design:

BILL BARRETT CORPORATION **UTAH (DUCHESNE COUNTY)** SEC. 12 T3S R6W U.S.B. & M. (NAD MD Reference:

#16-12D-36 BTR ORIGINAL WELLBORE FINAL SURVEYS

Local Co-ordinate Reference:

TVD Reference:

North Reference: **Survey Calculation Method:** Database:

Well #16-12D-36 BTR

KB-EST @ 5962.0usft (Original Well Elev) KB-EST @ 5962.0usft (Original Well Elev)

Minimum Curvature EDM 5000.1 Single User Db

4,219.0       3.52       280.12       4,217.8       1,744.2       -36.0       -44.0       46.0       1.50       0.70       23.1         4,283.0       4,09       289.70       4,281.7       1,680.3       -34.9       -48.1       50.0       1.33       0.89       14.9         4,346.0       4.79       290.23       4,344.5       1,617.5       -33.2       -52.7       54.5       1.11       1.11       0.8         4,409.0       5.23       287.33       4,407.3       1,554.7       -31.4       -57.9       59.6       0.81       0.70       -4.6         4,473.0       5.80       284.34       4,471.0       1,491.0       -29.8       -63.8       65.4       1.00       0.89       -4.6         4,536.0       6.50       277.75       4,533.6       1,428.4       -28.5       -70.4       72.0       1.58       1.11       -10.4         4,600.0       7.87       276.96       4,597.1       1,364.9       -27.5       -78.3       79.8       2.15       2.14       -12.4         4,603.0       8.41       270.99       4,721.8       1,240.2       -26.5       -96.6       98.0       0.38       0.27       -1.8 <t< th=""><th>ırvey</th><th>11. 12. 13. 12. 13. 14. 14. 14. 14. 14. 14. 14. 14. 14. 14</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></t<>	ırvey	11. 12. 13. 12. 13. 14. 14. 14. 14. 14. 14. 14. 14. 14. 14									
4.283.0       4.09       289.70       4.281.7       1.680.3       -34.9       -48.1       50.0       1.33       0.89       14.9         4.346.0       4.79       290.23       4,344.5       1,617.5       -33.2       -52.7       54.5       1.11       1.11       0.8         4,409.0       5.23       287.33       4,407.0       1,554.7       -31.4       -57.9       59.6       0.81       0.70       -4.6         4,473.0       5.80       284.34       4,471.0       1,491.0       -29.8       -63.8       65.4       1.00       0.89       -4.6         4,536.0       6.50       277.75       4,533.6       1,428.4       -28.5       -70.4       72.0       1.58       1.11       -10.4         4,663.0       8.44       272.12       4,659.5       1,302.5       -26.8       -87.2       88.7       1.42       0.90       -7.6         4,726.0       8.61       270.98       4,721.8       1,240.2       -26.5       -96.6       98.0       0.38       0.27       -1.8         4,790.0       8.80       271.24       4,785.0       1,177.0       -26.3       -106.3       107.6       0.30       0.30       0.0       0.4 <th>Depth</th> <th></th> <th></th> <th>Depth</th> <th>Depth</th> <th></th> <th></th> <th>Section</th> <th>Rate</th> <th>Rate</th> <th></th>	Depth			Depth	Depth			Section	Rate	Rate	
4,346.0       4.79       290.23       4,344.5       1,617.5       -33.2       -52.7       54.5       1.11       1.11       0.8         4,409.0       5.23       287.33       4,407.3       1,554.7       -31.4       -57.9       59.6       0.81       0.70       -4.6         4,473.0       5.80       284.34       4,471.0       1,491.0       -29.8       -63.8       65.4       1.00       0.89       -4.6         4,536.0       6.50       2277.75       4,533.6       1,428.4       -28.5       -70.4       72.0       1.58       1.11       -10.4         4,600.0       7.87       276.96       4,597.1       1,364.9       -27.5       -78.3       79.8       2.15       2.14       -1.2         4,663.0       8.44       272.12       4,659.5       1,302.5       -26.8       -87.2       88.7       1.42       0.90       -7.6         4,790.0       8.80       271.24       4,785.0       1,177.0       -26.3       -106.3       107.6       0.30       0.30       0.4         4,853.0       9.98       271.33       4,847.2       1,114.8       -26.1       -116.5       117.9       1.87       1.87       0.1	4,219.0	3.52		4,217.8	1,744.2	-36.0	-44.0	46.0	1.50	0.70	23.16
4,409.0       5.23       287.33       4,407.3       1,554.7       -31.4       -57.9       59.6       0.81       0.70       4.6         4,473.0       5.80       284.34       4,471.0       1,491.0       -29.8       -63.8       65.4       1.00       0.89       -4.6         4,536.0       6.50       277.75       4,533.6       1,428.4       -28.5       -70.4       72.0       1.58       1.11       -10.4         4,600.0       7.87       276.96       4,597.1       1,364.9       -27.5       -78.3       79.8       2.15       2.14       -1.2         4,663.0       8.44       272.12       4,659.5       1,302.5       -26.8       -87.2       88.7       1.42       0.90       -7.6         4,726.0       8.61       270.98       4,721.8       1,240.2       -26.5       -96.6       98.0       0.38       0.27       -1.8         4,790.0       8.80       271.24       4,785.0       1,177.0       -26.3       -106.3       107.6       0.30       0.30       0.4         4,853.0       9.98       271.33       4,847.2       1,114.8       -26.1       -116.5       117.9       1.87       1.87       0.1         <	•									0.89	14.97
4,473.0 5.80 284.34 4,471.0 1,491.0 -29.8 -63.8 65.4 1.00 0.89 4.6 4,536.0 6.50 277.75 4,533.6 1,428.4 -28.5 -70.4 72.0 1.58 1.11 -10.4 4,600.0 7.87 276.96 4,597.1 1,364.9 -27.5 -78.3 79.8 2.15 2.14 -1.2 4,663.0 8.44 272.12 4,659.5 1,302.5 -26.8 -87.2 88.7 1.42 0.90 -7.6 4,726.0 8.61 270.98 4,721.8 1,240.2 -26.5 -96.6 98.0 0.38 0.27 -1.8 4,790.0 8.80 271.24 4,785.0 1,177.0 -26.3 -106.3 107.6 0.30 0.30 0.4 4,853.0 9.98 271.33 4,847.2 1,114.8 -26.1 -116.5 117.9 1.87 1.87 0.1 4,917.0 10.68 269.48 4,910.1 1,051.9 -26.0 -128.0 129.3 1.21 1.09 -2.8 4,980.0 12.10 268.17 4,971.9 990.1 -26.3 -140.5 141.8 2.29 2.25 -2.0 5,044.0 12.96 271.07 5,034.4 927.6 -26.4 -154.3 155.6 1.66 1.34 4.5 5,107.0 13.18 270.63 5,095.7 866.3 -26.2 -168.6 169.8 0.38 0.35 -0.7 5,234.0 15.21 269.96 5,157.0 805.0 -26.3 -183.2 184.4 1.00 0.70 -3.0 5,234.0 15.21 269.96 5,157.0 805.0 -26.3 -183.2 184.4 1.00 0.70 -3.0 5,234.0 15.21 269.98 5,157.0 621.3 -27.0 -26.7 -199.1 200.3 2.50 2.48 -1.2 5,297.0 16.52 269.48 5,279.6 682.4 -27.1 -216.3 217.5 2.19 2.08 2.5 5,361.0 17.89 271.24 5,340.7 621.3 -27.0 -235.2 236.4 2.29 2.14 2.7 5,424.0 17.09 269.84 5,400.8 561.2 -26.8 -254.2 255.3 1.43 -1.27 -2.2 5,488.0 16.17 270.01 5,462.2 499.8 -26.8 -272.5 273.6 1.44 -1.44 0.2 5,551.0 15.82 271.07 5,522.7 439.3 -26.7 -289.8 290.9 0.72 -0.56 1.6 5,615.0 16.44 273.62 5,584.2 377.8 -25.9 -307.6 308.6 1.47 0.97 3.9 5,678.0 17.18 273.35 5,644.5 317.5 -24.8 -325.8 326.7 1.18 1.17 -0.4 5,685.0 17.8 5,764.7 257.3 -24.0 -344.4 345.2 0.76 0.14 -2.5 5,805.0 15.86 269.48 5,760.0 196.0 -23.8 -362.7 363.4 2.43 -2.20 -3.5											0.84
4,536.0       6.50       277.75       4,533.6       1,428.4       -28.5       -70.4       72.0       1.58       1.11       -10.4         4,600.0       7.87       276.96       4,597.1       1,364.9       -27.5       -78.3       79.8       2.15       2.14       -1.2         4,663.0       8.44       272.12       4,669.5       1,302.5       -26.8       -87.2       88.7       1,42       0.90       -7.6         4,726.0       8.61       270.98       4,721.8       1,240.2       -26.5       -96.6       98.0       0.38       0.27       -1.8         4,790.0       8.80       271.24       4,785.0       1,177.0       -26.3       -106.3       107.6       0.30       0.30       0.3         4,853.0       9.98       271.33       4,847.2       1,114.8       -26.1       -116.5       117.9       1.87       1.87       0.1         4,980.0       12.10       268.17       4,971.9       990.1       -26.3       -140.5       141.8       2.29       2.25       -2.0         5,044.0       12.96       271.07       5,034.4       927.6       -26.4       -154.3       155.6       166       1.34       4.5								59.6	0.81	0.70	-4.60
4,600.0       7.87       276.96       4,597.1       1,364.9       -27.5       -78.3       79.8       2.15       2.14       -1.2         4,663.0       8.44       272.12       4,659.5       1,302.5       -26.8       -87.2       88.7       1.42       0.90       -7.6         4,726.0       8.61       270.98       4,721.8       1,240.2       -26.5       -96.6       98.0       0.38       0.27       -1.8         4,790.0       8.80       271.24       4,785.0       1,177.0       -26.3       -106.3       107.6       0.30       0.30       0.4         4,853.0       9.98       271.33       4,847.2       1,114.8       -26.1       -116.5       117.9       1.87       1.87       0.1         4,917.0       10.68       269.48       4,910.1       1,051.9       -26.0       -128.0       129.3       1.21       1.09       -2.8         4,980.0       12.10       268.17       4,971.9       990.1       -26.3       -140.5       141.8       2.29       2.25       -2.0         5,044.0       12.96       271.07       5,034.4       927.6       -26.4       -154.3       155.6       1.66       1.34       4.5					.,						-4.67
4,663.0 8.44 272.12 4,659.5 1,302.5 -26.8 -87.2 88.7 1.42 0.90 -7.6 4,726.0 8.61 270.98 4,721.8 1,240.2 -26.5 -96.6 98.0 0.38 0.27 -1.8 4,790.0 8.80 271.24 4,785.0 1,177.0 -26.3 -106.3 107.6 0.30 0.30 0.4 4,853.0 9.98 271.33 4,847.2 1,114.8 -26.1 -116.5 117.9 1.87 1.87 0.1 4,917.0 10.68 269.48 4,910.1 1,051.9 -26.0 -128.0 129.3 1.21 1.09 -2.8 4,980.0 12.10 268.17 4,971.9 990.1 -26.3 -140.5 141.8 2.29 2.25 -2.0 5,044.0 12.96 271.07 5,034.4 927.6 -26.4 -154.3 155.6 1.66 1.34 4.5 5,107.0 13.18 270.63 5,095.7 866.3 -26.2 -168.6 169.8 0.38 0.35 -0.7 5,170.0 13.62 268.69 5,157.0 805.0 -26.3 -183.2 184.4 1.00 0.70 -3.0 5,234.0 15.21 267.90 5,219.0 743.0 -26.7 -199.1 200.3 2.50 2.48 -1.2 5,297.0 16.52 269.48 5,279.6 682.4 -27.1 -216.3 217.5 2.19 2.08 2.5 5,361.0 17.89 271.24 5,340.7 621.3 -27.0 -235.2 236.4 2.29 2.14 2.7 5,484.0 16.17 270.01 5,462.2 499.8 -26.8 -272.5 273.6 1.44 -1.44 0.2 5,488.0 16.17 270.01 5,462.2 499.8 -26.8 -272.5 273.6 1.44 -1.44 0.2 5,551.0 15.82 271.07 5,522.7 439.3 -26.7 -289.8 290.9 0.72 -0.56 1.6 5,615.0 16.44 273.62 5,584.2 377.8 -25.9 -307.6 308.6 1.47 0.97 3.9 5,615.0 17.18 273.35 5,644.5 317.5 -24.8 -325.8 326.7 1.18 1.17 0.4 5,805.0 15.86 269.48 5,766.0 196.0 -23.8 -362.7 363.4 2.43 -2.20 -3.5 5,805.0 15.86 269.48 5,766.0 196.0 -23.8 -362.7 363.4 2.43 -2.20 -3.5 5,805.0 15.86 269.48 5,766.0 196.0 -23.8 -362.7 363.4 2.43 -2.20 -3.5 5,805.0 15.86 269.48 5,766.0 196.0 -23.8 -362.7 363.4 2.43 -2.20 -3.5 5,805.0 15.86 269.48 5,766.0 196.0 -23.8 -362.7 363.4 2.43 -2.20 -3.5 5,805.0 15.86 269.48 5,766.0 196.0 -23.8 -362.7 363.4 2.43 -2.20 -3.5 5,805.0 15.86 269.48 5,766.0 196.0 -23.8 -362.7 363.4 2.43 -2.20 -3.5 5,805.0 15.86 269.48 5,766.0 196.0 -23.8 -362.7 363.4 2.43 -2.20 -3.5 5,805.0 15.86 269.48 5,766.0 196.0 -23.8 -362.7 363.4 2.43 -2.20 -3.5 5,805.0 15.86 269.48 5,766.0 196.0 -23.8 -362.7 363.4 2.43 -2.20 -3.5 5,805.0 15.86 269.48 5,766.0 196.0 -23.8 -362.7 363.4 2.43 -2.20 -3.5 5,805.0 15.86 269.48 5,766.0 196.0 -23.8 -362.7 363.4 2.43 -2.20 -3.5 5,805.0 15.86 269.48 5,766.0 196.0 -23											-10.46
4,726.0       8.61       270.98       4,721.8       1,240.2       -26.5       -96.6       98.0       0.38       0.27       -1.8         4,790.0       8.80       271.24       4,785.0       1,177.0       -26.3       -106.3       107.6       0.30       0.30       0.4         4,853.0       9.98       271.33       4,847.2       1,114.8       -26.1       -116.5       117.9       1.87       1.87       0.1         4,917.0       10.68       269.48       4,910.1       1,051.9       -26.0       -128.0       129.3       1.21       1.09       -2.8         4,980.0       12.10       268.17       4,971.9       990.1       -26.3       -140.5       141.8       2.29       2.25       -2.0         5,044.0       12.96       271.07       5,034.4       927.6       -26.4       -154.3       155.6       1.66       1.34       4.5         5,107.0       13.18       270.63       5,095.7       866.3       -26.2       -168.6       169.8       0.38       0.35       -0.7         5,234.0       15.21       267.90       5,219.0       743.0       -26.7       -199.1       200.3       2.50       2.48       -1.2											-1.23
4,790.0       8.80       271.24       4,785.0       1,177.0       -26.3       -106.3       107.6       0.30       0.30       0.4         4,853.0       9.98       271.33       4,847.2       1,114.8       -26.1       -116.5       117.9       1.87       1.87       0.1         4,917.0       10.68       269.48       4,910.1       1,051.9       -26.0       -128.0       129.3       1.21       1.09       -2.8         4,980.0       12.10       268.17       4,971.9       990.1       -26.3       -140.5       141.8       2.29       2.25       -2.0         5,044.0       12.96       271.07       5,034.4       927.6       -26.4       -154.3       155.6       1.66       1.34       4.5         5,107.0       13.18       270.63       5,095.7       866.3       -26.2       -168.6       169.8       0.38       0.35       -0.7         5,170.0       13.62       268.69       5,157.0       805.0       -26.3       -183.2       184.4       1.00       0.70       -3.0         5,234.0       15.21       267.90       5,219.0       743.0       -26.7       -199.1       200.3       2.50       2.48       -1.2											1
4,853.0       9.98       271.33       4,847.2       1,114.8       -26.1       -116.5       117.9       1.87       1.87       0.1         4,917.0       10.68       269.48       4,910.1       1,051.9       -26.0       -128.0       129.3       1.21       1.09       -2.8         4,980.0       12.10       268.17       4,971.9       990.1       -26.3       -140.5       141.8       2.29       2.25       -2.0         5,044.0       12.96       271.07       5,034.4       927.6       -26.4       -154.3       155.6       1.66       1.34       4.5         5,107.0       13.18       270.63       5,095.7       866.3       -26.2       -168.6       169.8       0.38       0.35       -0.7         5,170.0       13.62       268.69       5,157.0       805.0       -26.3       -183.2       184.4       1.00       0.70       -3.0         5,234.0       15.21       267.90       5,219.0       743.0       -26.7       -199.1       200.3       2.50       2.48       -1.2         5,297.0       16.52       269.48       5,279.6       682.4       -27.1       -216.3       217.5       2.19       2.08       2.5											
4,917.0       10.68       269.48       4,910.1       1,051.9       -26.0       -128.0       129.3       1,21       1.09       -2.8         4,980.0       12.10       268.17       4,971.9       990.1       -26.3       -140.5       141.8       2.29       2.25       -2.0         5,044.0       12.96       271.07       5,034.4       927.6       -26.4       -154.3       155.6       1.66       1.34       4.5         5,107.0       13.18       270.63       5,095.7       866.3       -26.2       -168.6       169.8       0.38       0.35       -0.7         5,170.0       13.62       268.69       5,157.0       805.0       -26.3       -183.2       184.4       1.00       0.70       -3.0         5,234.0       15.21       267.90       5,219.0       743.0       -26.7       -199.1       200.3       2.50       2.48       -1.2         5,297.0       16.52       269.48       5,279.6       682.4       -27.1       -216.3       217.5       2.19       2.08       2.5         5,361.0       17.89       271.24       5,340.7       621.3       -27.0       -235.2       236.4       2.29       2.14       2.7											
4,980.0       12.10       268.17       4,971.9       990.1       -26.3       -140.5       141.8       2.29       2.25       -2.0         5,044.0       12.96       271.07       5,034.4       927.6       -26.4       -154.3       155.6       1.66       1.34       4.5         5,107.0       13.18       270.63       5,095.7       866.3       -26.2       -168.6       169.8       0.38       0.35       -0.7         5,170.0       13.62       268.69       5,157.0       805.0       -26.3       -183.2       184.4       1.00       0.70       -3.0         5,234.0       15.21       267.90       5,219.0       743.0       -26.7       -199.1       200.3       2.50       2.48       -1.2         5,297.0       16.52       269.48       5,279.6       682.4       -27.1       -216.3       217.5       2.19       2.08       2.5         5,361.0       17.89       271.24       5,340.7       621.3       -27.0       -235.2       236.4       2.29       2.14       2.7         5,424.0       17.09       269.84       5,400.8       561.2       -26.8       -254.2       255.3       1.43       -1.27       -2.2											-2.89
5,044.0       12.96       271.07       5,034.4       927.6       -26.4       -154.3       155.6       1.66       1.34       4.5         5,107.0       13.18       270.63       5,095.7       866.3       -26.2       -168.6       169.8       0.38       0.35       -0.7         5,170.0       13.62       268.69       5,157.0       805.0       -26.3       -183.2       184.4       1.00       0.70       -3.0         5,234.0       15.21       267.90       5,219.0       743.0       -26.7       -199.1       200.3       2.50       2.48       -1.2         5,297.0       16.52       269.48       5,279.6       682.4       -27.1       -216.3       217.5       2.19       2.08       2.5         5,361.0       17.89       271.24       5,340.7       621.3       -27.0       -235.2       236.4       2.29       2.14       2.7         5,424.0       17.09       269.84       5,400.8       561.2       -26.8       -254.2       255.3       1.43       -1.27       -2.2         5,488.0       16.17       270.01       5,462.2       499.8       -26.8       -272.5       273.6       1.44       -1.44       0.2	•										-2.08
5,170.0       13.62       268.69       5,157.0       805.0       -26.3       -183.2       184.4       1.00       0.70       -3.0         5,234.0       15.21       267.90       5,219.0       743.0       -26.7       -199.1       200.3       2.50       2.48       -1.2         5,297.0       16.52       269.48       5,279.6       682.4       -27.1       -216.3       217.5       2.19       2.08       2.5         5,361.0       17.89       271.24       5,340.7       621.3       -27.0       -235.2       236.4       2.29       2.14       2.7         5,424.0       17.09       269.84       5,400.8       561.2       -26.8       -254.2       255.3       1.43       -1.27       -2.2         5,488.0       16.17       270.01       5,462.2       499.8       -26.8       -272.5       273.6       1.44       -1.44       0.2         5,551.0       15.82       271.07       5,522.7       439.3       -26.7       -289.8       290.9       0.72       -0.56       1.6         5,615.0       16.44       273.62       5,584.2       377.8       -25.9       -307.6       308.6       1.47       0.97       3.9	5,044.0	12.96	271.07		927.6	-26.4					4.53
5,170.0       13.62       268.69       5,157.0       805.0       -26.3       -183.2       184.4       1.00       0.70       -3.0         5,234.0       15.21       267.90       5,219.0       743.0       -26.7       -199.1       200.3       2.50       2.48       -1.2         5,297.0       16.52       269.48       5,279.6       682.4       -27.1       -216.3       217.5       2.19       2.08       2.5         5,361.0       17.89       271.24       5,340.7       621.3       -27.0       -235.2       236.4       2.29       2.14       2.7         5,424.0       17.09       269.84       5,400.8       561.2       -26.8       -254.2       255.3       1.43       -1.27       -2.2         5,488.0       16.17       270.01       5,462.2       499.8       -26.8       -272.5       273.6       1.44       -1.44       0.2         5,551.0       15.82       271.07       5,522.7       439.3       -26.7       -289.8       290.9       0.72       -0.56       1.6         5,615.0       16.44       273.62       5,584.2       377.8       -25.9       -307.6       308.6       1.47       0.97       3.9	5,107.0	13.18	270.63	5.095.7	866.3	-26.2	-168.6	169.8	0.38	0.35	-0.70
5,234.0       15.21       267.90       5,219.0       743.0       -26.7       -199.1       200.3       2.50       2.48       -1.2         5,297.0       16.52       269.48       5,279.6       682.4       -27.1       -216.3       217.5       2.19       2.08       2.5         5,361.0       17.89       271.24       5,340.7       621.3       -27.0       -235.2       236.4       2.29       2.14       2.7         5,424.0       17.09       269.84       5,400.8       561.2       -26.8       -254.2       255.3       1.43       -1.27       -2.2         5,488.0       16.17       270.01       5,462.2       499.8       -26.8       -272.5       273.6       1.44       -1.44       0.2         5,551.0       15.82       271.07       5,522.7       439.3       -26.7       -289.8       290.9       0.72       -0.56       1.6         5,615.0       16.44       273.62       5,584.2       377.8       -25.9       -307.6       308.6       1.47       0.97       3.9         5,678.0       17.18       273.35       5,644.5       317.5       -24.8       -325.8       326.7       1.18       1.17       -0.4											-3.08
5,361.0     17.89     271.24     5,340.7     621.3     -27.0     -235.2     236.4     2.29     2.14     2.7       5,424.0     17.09     269.84     5,400.8     561.2     -26.8     -254.2     255.3     1.43     -1.27     -2.2       5,488.0     16.17     270.01     5,462.2     499.8     -26.8     -272.5     273.6     1.44     -1.44     0.2       5,551.0     15.82     271.07     5,522.7     439.3     -26.7     -289.8     290.9     0.72     -0.56     1.6       5,615.0     16.44     273.62     5,584.2     377.8     -25.9     -307.6     308.6     1.47     0.97     3.9       5,678.0     17.18     273.35     5,644.5     317.5     -24.8     -325.8     326.7     1.18     1.17     -0.4       5,741.0     17.27     271.77     5,704.7     257.3     -24.0     -344.4     345.2     0.76     0.14     -2.5       5,805.0     15.86     269.48     5,766.0     196.0     -23.8     -362.7     363.4     2.43     -2.20     -3.5						-26.7	-199.1	200.3			-1.23
5,424.0       17.09       269.84       5,400.8       561.2       -26.8       -254.2       255.3       1.43       -1.27       -2.2         5,488.0       16.17       270.01       5,462.2       499.8       -26.8       -272.5       273.6       1.44       -1.44       0.2         5,551.0       15.82       271.07       5,522.7       439.3       -26.7       -289.8       290.9       0.72       -0.56       1.6         5,615.0       16.44       273.62       5,584.2       377.8       -25.9       -307.6       308.6       1.47       0.97       3.9         5,678.0       17.18       273.35       5,644.5       317.5       -24.8       -325.8       326.7       1.18       1.17       -0.4         5,741.0       17.27       271.77       5,704.7       257.3       -24.0       -344.4       345.2       0.76       0.14       -2.5         5,805.0       15.86       269.48       5,766.0       196.0       -23.8       -362.7       363.4       2.43       -2.20       -3.5											2.51
5,488.0       16.17       270.01       5,462.2       499.8       -26.8       -272.5       273.6       1.44       -1.44       0.2         5,551.0       15.82       271.07       5,522.7       439.3       -26.7       -289.8       290.9       0.72       -0.56       1.6         5,615.0       16.44       273.62       5,584.2       377.8       -25.9       -307.6       308.6       1.47       0.97       3.9         5,678.0       17.18       273.35       5,644.5       317.5       -24.8       -325.8       326.7       1.18       1.17       -0.4         5,741.0       17.27       271.77       5,704.7       257.3       -24.0       -344.4       345.2       0.76       0.14       -2.5         5,805.0       15.86       269.48       5,766.0       196.0       -23.8       -362.7       363.4       2.43       -2.20       -3.5	5,361.0	17.89	271.24	5,340.7	621.3	-27.0	-235.2	236.4	2.29	2.14	2.75
5,551.0       15.82       271.07       5,522.7       439.3       -26.7       -289.8       290.9       0.72       -0.56       1.6         5,615.0       16.44       273.62       5,584.2       377.8       -25.9       -307.6       308.6       1.47       0.97       3.9         5,678.0       17.18       273.35       5,644.5       317.5       -24.8       -325.8       326.7       1.18       1.17       -0.4         5,741.0       17.27       271.77       5,704.7       257.3       -24.0       -344.4       345.2       0.76       0.14       -2.5         5,805.0       15.86       269.48       5,766.0       196.0       -23.8       -362.7       363.4       2.43       -2.20       -3.6	-,		269.84	5,400.8	561.2		-254.2	255.3	1.43	-1.27	-2.22
5,615.0     16.44     273.62     5,584.2     377.8     -25.9     -307.6     308.6     1.47     0.97     3.9       5,678.0     17.18     273.35     5,644.5     317.5     -24.8     -325.8     326.7     1.18     1.17     -0.4       5,741.0     17.27     271.77     5,704.7     257.3     -24.0     -344.4     345.2     0.76     0.14     -2.5       5,805.0     15.86     269.48     5,766.0     196.0     -23.8     -362.7     363.4     2.43     -2.20     -3.5	•			•						-1.44	0.27
5,678.0     17.18     273.35     5,644.5     317.5     -24.8     -325.8     326.7     1.18     1.17     -0.4       5,741.0     17.27     271.77     5,704.7     257.3     -24.0     -344.4     345.2     0.76     0.14     -2.5       5,805.0     15.86     269.48     5,766.0     196.0     -23.8     -362.7     363.4     2.43     -2.20     -3.5				•							1.68
5,741.0     17.27     271.77     5,704.7     257.3     -24.0     -344.4     345.2     0.76     0.14     -2.5       5,805.0     15.86     269.48     5,766.0     196.0     -23.8     -362.7     363.4     2.43     -2.20     -3.5											3.98
5,805.0 15.86 269.48 5,766.0 196.0 -23.8 -362.7 363.4 2.43 -2.20 -3.5				•							
											-2.51
# # # # # # # # # # # # # # # # # # #											-3.58
	,										0.43 -3.03
	•										2.24
	6 059 O	16 35	268 60	6,000,6	47.6						-0.83
· · · · · · · · · · · · · · · · · · ·											-2.08
											-2.79
6,249.0 13.40 265.97 6,193.0 -231.0 -27.8 -484.3 485.1 1.80 -1.80 0.5											0.55
6,312.0 13.36 269.84 6,254.2 -292.2 -28.4 -498.8 499.6 1.42 -0.06 6.1	6,312.0	13.36	269.84	6,254.2	-292.2	-28.4	-498.8	499.6	1.42	-0.06	6.14
6,376.0 11.73 266.76 6,316.7 -354.7 -28.7 -512.7 513.5 2.75 -2.55 -4.8	6,376.0	11.73	266.76	6,316.7	-354.7	-28.7	-512.7	513.5	2.75	-2.55	-4.81
6,439.0 10.15 263.68 6,378.6 -416.6 -29.7 -524.6 525.5 2.67 -2.51 -4.8									2.67	-2.51	-4.89
	•										2.61
											-3.06
											-2.79
											9.75
											4.22
											-1.77 -52.49
											-8.42
,	•										
											14.72 -12.64
l											-12.04 -8.41
											6.76
	7,486.0	1.05	213.67			-48.9					1.82
7,581.0 0.75 26.91 7,517.0 -1,555.0 -49.1 -584.0 585.8 1.89 -0.32 182.3	7,581.0	0.75	26.91	7,517.0	-1,555.0	-49.1	-584.0	585.8	1.89	-0.32	182.36
7,676.0 0.48 330.13 7,612.0 -1,650.0 -48.2 -583.9 585.7 0.66 -0.28 -59.7		0.48	330.13								-59.77
					•						-106.95
7,866.0 1.19 226.07 7,802.0 -1,840.0 -49.2 -585.5 587.4 0.60 0.60 -2.5	7,866.0	1.19	226.07	7,802.0	-1,840.0	-49.2	-585.5	587.4	0.60	0.60	-2.59



Company: Project: Site:

**BILL BARRETT CORPORATION** UTAH (DUCHESNE COUNTY)

SEC. 12 T3S R6W U.S.B. & M. (NAD MD Reference: #16-12D-36 BTR

Well: Wellbore: Design:

ORIGINAL WELLBORE FINAL SURVEYS

**Local Co-ordinate Reference:** 

TVD Reference: North Reference:

**Survey Calculation Method:** 

Database:

Well #16-12D-36 BTR

KB-EST @ 5962.0usft (Original Well Elev) KB-EST @ 5962.0usft (Original Well Elev)

Minimum Curvature

EDM 5000.1 Single User Db

vey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100ust
7,962.0	0.09	295.06	7,898.0	-1,936.0	-49.9	-586.3	588.3	1.21	-1.15	71.8
8,057.0	0.79	237.05	7,993.0	-2,031.0	-50.2	-587.0	588.9	0.79	0.74	-61.0
8,152.0	0.92	201.37	0.880,8	-2,126.0	-51.3	-587.8	589.8	0.57	0.14	-37.
8,247.0	0.70	208.58	8,183.0	-2,221.0	-52.5	-588.3	590.4	0.25	-0.23	7.
8,342.0	0.88	209.54	8,278.0	-2,316.0	-53.7	-589.0	591.1	0.19	0.19	1.
8,438.0	0.53	281.35	8,374.0	-2,412.0	-54.2	-589.8	591.9	0.91	-0.36	74.
8,533.0	0.44	327.40	8,469.0	-2,507.0	-53.8	-590.4	592.5	0.41	-0.09	48.
8,628.0	0.18	302.09	8,564.0	-2,602.0	-53.4	-590.7	592.8	0.30	-0.27	-26
8,723.0	0.22	238.99	8,658.9	-2,696.9	-53.4	-591.0	593.1	0.22	0.04	-66
8,818.0	0.75	213.32	8,753.9	-2,791.9	-54.1	-591.5	593.7	0.59	0.56	-27
8,913.0	0.79	222.90	8,848.9	-2,886.9	-55.1	-592.3	594.5	0.14	0.04	10
9,008.0	1.41	213.32	8,943.9	-2,981.9	-56.5	-593.4	595.7	0.68	0.65	-10
9,103.0	2.02	202.61	9,038.9	-3,076.9	-59.0	-594.7	597.1	0.72	0.64	-11
9,199.0	1.71	217.72	9,134.8	-3,172.8	-61.7	-596.2	598.8	0.60	-0.32	15
9,294.0	1.63	217.98	9,229.8	-3,267.8	-63.9	-597.9	600.6	0.08	-0.08	0
9,389.0	1.63	228.09	9,324.7	-3,362.7	-65.9	-599.7	602.6	0.30	0.00	10
9,484.0	1.71	222.11	9,419.7	-3,457.7	-67.8	-601.7	604.6	0.20	0.08	-6
9,580.0	2.02	226.15	9,515.7	-3,553.7	-70.1	-603.9	606.9	0.35	0.32	4
9,675.0	1.85	222.55	9,610.6	-3,648.6	-72.4	-606.1	609.3	0.22	-0.18	-3
9,770.0	1.85	221.94	9,705.6	-3,743.6	-74.6	-608.2	611.5	0.02	0.00	-0
9,865.0	2.46	216.93	9,800.5	-3,838.5	-77.4	-610.4	613.9	0.67	0.64	-5
9,960.0	2.72	222.29	9,895.4	-3,933.4	-80.7	-613.2	616.9	0.37	0.27	5
10,055.0	2.90	217.28	9,990.3	-4,028.3	-84.3	-616.1	620.0	0.32	0.19	-5
10,150.0	2.86	213.50	10,085.2	-4,123.2	-88.2	-618.9	623.0	0.20	-0.04	-3
10,246.0	3.25	220.62	10,181.0	-4,219.0	-92.2	-622.0	626.3	0.57	0.41	7
10,341.0	3.34	226.42	10,275.9	-4,313.9	-96.2	-625.7	630.3	0.36	0.09	6
10,436.0	3.87	232.49	10,370.7	-4,408.7	-100.0	-630.3	635.1	0.69	0.56	6
10,505.0	4.22	237.32	10,439.5	-4,477.5	-102.8	-634.3	639.2	0.71	0.51	7
	APOLATION TO									
10,555.0	4.22	237.32	10,489.4	-4,527.4	-104.8	-637.4	642.4	0.00	0.00	0



Company: Project:

BILL BARRETT CORPORATION UTAH (DUCHESNE COUNTY)

Site:

SEC. 12 T3S R6W U.S.B. & M. (NAD MD Reference:

Well: Wellbore: Design:

#16-12D-36 BTR ORIGINAL WELLBORE FINAL SURVEYS

Local Co-ordinate Reference:

TVD Reference:

North Reference:

**Survey Calculation Method:** 

Database:

Well #16-12D-36 BTR

KB-EST @ 5962.0usft (Original Well Elev) KB-EST @ 5962.0usft (Original Well Elev)

Minimum Curvature

EDM 5000.1 Single User Db

#### **Targets**

#### **Target Name**

- hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PROPOSED TD (P4)	0.00	0.00		-32.4	-549.2	7,253,860.86	1,918,242.43	40° 13' 46.139 N	110° 30' 17.662 W
<ul> <li>survey misses ta</li> </ul>	rget center b	oy 116.3us	ft at 10555.	0usft MD (10	489.4 TVD,	-104.8 N, -637.4	E)		

- Rectangle (sides W200.0 H200.0 D0.0)

PROPOSED TD (P3) 0.00

0.00 10,512.0

- survey misses target center by 116.3usft at 10555.0usft MD (10489.4 TVD, -104.8 N, -637.4 E) - Rectangle (sides W200.0 H200.0 D0.0)

PROPOSED TD

-32.4

-549.2 7,253,860.86 1,918,242.43

-549.2 7,253,860.86 1,918,242.43 40° 13' 46.139 N 110° 30' 17.662 W

40° 13' 46.139 N 110° 30' 17.662 W

OPOSED TD 0.00 0.00 7,807.0 -32.4 -549.2 7,253,860.86 - survey misses target center by 40.1usft at 7870.6usft MD (7806.6 TVD, -49.3 N, -585.6 E)

- Rectangle (sides W200.0 H200.0 D0.0)

#### **Survey Annotations**

Measured	Vertical	Local Coor	dinates		to the account
Depth (usft)	Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment	
10,555.0	10,489.4	-104.8	-637.4	EXTRAPOL	ATION TO TD

i			
Checked By:	Approved Du	Data	
Checked by.	Approved By:	Date:	

	STATE OF UTAH			FORM 9
ı	DEPARTMENT OF NATURAL RESOL DIVISION OF OIL, GAS, AND N		ì	5.LEASE DESIGNATION AND SERIAL NUMBER: 1420H626503
SUNDR	Y NOTICES AND REPORT	S ON	WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	posals to drill new wells, significan reenter plugged wells, or to drill hor n for such proposals.			7.UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Oil Well				8. WELL NAME and NUMBER: 16-12D-36 BTR
2. NAME OF OPERATOR: BILL BARRETT CORP				9. API NUMBER: 43013509800000
3. ADDRESS OF OPERATOR: 1099 18th Street Ste 2300	, Denver, CO, 80202		NE NUMBER: 312-8134 Ext	9. FIELD and POOL or WILDCAT: ALTAMONT
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0825 FSL 0260 FEL				COUNTY: DUCHESNE
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 2 Township: 03.0S Range: 06.0W Me	eridian:	U	STATE: UTAH
11. CHEC	K APPROPRIATE BOXES TO INDIC	CATE N	ATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION			TYPE OF ACTION	
	ACIDIZE		ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS		CHANGE TUBING	CHANGE WELL NAME
Approximate date work will start.	CHANGE WELL STATUS		COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	□ F	RACTURE TREAT	☐ NEW CONSTRUCTION
5/24/2013	OPERATOR CHANGE		PLUG AND ABANDON	PLUG BACK
SPUD REPORT	PRODUCTION START OR RESUME		RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION		SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
	TUBING REPAIR		ENT OR FLARE	WATER DISPOSAL
DRILLING REPORT Report Date:	WATER SHUTOFF		SI TA STATUS EXTENSION	APD EXTENSION
кероп Баге.			I IA STATUS EXTENSION	OTHER: Earned Lease
	WILDCAT WELL DETERMINATION	•	OTHER	·
	completed operations. Clearly she been earned for this well. 1420H626503.	-		Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY July 11, 2013
NAME (PLEASE PRINT) Venessa Langmacher	PHONE NU 303 312-8172		TITLE Senior Permit Analyst	
SIGNATURE	503 312-0172		DATE	
N/A			6/18/2013	

Division of Oil, Gas and Mining

Operator Change/Name Change Worksheet-for State use only

Effective Date:

11/1/2016

FORMER OPERATOR:	NEW OPERATOR:
Bill Barrett Corporation	Rig II, LLC
1099 18th Street, Suite 2300	1582 West 2600 South
Denver, CO 80202	Woods Cross, UT 84087
CA Number(s):	Unit(s):

#### WELL INFORMATION:

Well Name	Sec	TWN	RNG	API	Entity	Mineral	Surface	Type	Status
See Attached List									

#### **OPERATOR CHANGES DOCUMENTATION:**

1. Sundry or legal documentation was received from the **FORMER** operator on:

10/21/2016

2. Sundry or legal documentation was received from the **NEW** operator on:

10/21/2016

3. New operator Division of Corporations Business Number:

8256968-0160

#### **REVIEW:**

1. Surface Agreement Sundry from NEW operator on Fee Surface wells received on:

N/A

2. Receipt of Acceptance of Drilling Procedures for APD on:

10/21/2016

3. Reports current for Production/Disposition & Sundries:

11/2/2016

4. OPS/SI/TA well(s) reviewed for full cost bonding:

11/3/2016

5. UIC5 on all disposal/injection/storage well(s) approved on:

11/3/2016

6. Surface Facility(s) included in operator change:

None

7. Inspections of PA state/fee well sites complete on (only upon operators request):

11/3/2016

#### **NEW OPERATOR BOND VERIFICATION:**

1. Federal well(s) covered by Bond Number:

UTB000712

2. Indian well(s) covered by Bond Number:

LPM 922467

3.State/fee well(s) covered by Bond Number(s):

9219529

#### **DATA ENTRY:**

1. Well(s) update in the OGIS on:

11/7/2016

2. Entity Number(s) updated in OGIS on:

11/7/2016

3. Unit(s) operator number update in OGIS on:

N/A

4. Surface Facilities update in OGIS on:

N/A

5. State/Fee well(s) attached to bond(s) in RBDMS on:

11/7/2016

6. Surface Facilities update in RBDMS on:

N/A

#### **COMMENTS:**

Well Name	Sec	TWN	RNG	API Number	Entity	Mineral	Surface	Туре	Status
SWD 9-36 BTR	9	0308	060W	4301350646	18077	Indian	Fee	WD	Α
16-6D-46 BTR SWD	6	040S	060W	4301350781	18327	Indian	Fee	WD	Α
6-32-36 BTR SWD	32	030S	060W	4301350921	18329	Indian	Fee	WD	Α
LC TRIBAL 8-26D-47	26	040S	070W	4301334024		Indian	Indian	OW	APD
16-21D-37 BTR	21	030S	070W	4301350758		Indian	Fee	OW	APD
14-11D-37 BTR	11	030S	070W	4301350862		Indian	Fee	OW	APD
7-17D-46 BTR	17	040\$	060W	4301350883		Indian	Indian	OW	APD
14-12D-37 BTR	12	030S	070W	4301350894		Indian	Fee	OW	APD
1-18D-36 BTR	18	030S	060W	4301350922		Indian	Fee	OW	APD
13-2D-45 BTR	2	040S	050W	4301350931		Indian	Indian	OW	APD
5H-16-46 BTR	16	040S	060W	4301350992		Indian	Indian	OW	APD
9H-17-45 BTR	17	040S	050W	4301351098		Indian	Indian	OW	APD
13H-8-46 BTR UB	8	040S	060W	4301351124		Indian	Indian	OW	APD
BH-9-46 BTR	9	040S	060W	4301351140		Indian	Indian	ow	APD
_C TRIBAL 7-31D-37	31	030S	070W	4301351147		Indian	Fee	ow	APD
14-16D-45 BTR	16	040S	050W	4301351178		Indian	Indian	ow	APD
16-19D-37 BTR	19	030S	070W	4301351179		Indian	Fee	OW	APD
6-2D-45 BTR	2	040S	050W	4301351234		Indian	Indian	ow	APD
2-2D-45 BTR	2	040S	050W	4301351235		Indian	Indian	ow	APD
10-26-35 BTR	26	030S	050W	4301351248		Indian	Fee	OW	APD
C TRIBAL 1H-33-46	33	040S	060W	4301351257		Indian	Fee	ow	APD
_C TRIBAL 9-25D-46	25	040S	060W	4301351276		Indian	Indian	ow	APD
C TRIBAL 8H-30-45	30	040S	050W	4301351277	(8.7)	Indian	Indian	OW	APD
_C TRIBAL 16H-30-45	30	040S	050W	4301351279		Indian	Indian	ow	APD
_C TRIBAL 13-30D-45	30	040S	050W	4301351282		Indian	Indian	ow	APD
_C TRIBAL 16H-36-46	36	040S	060W	4301351291		Indian	Indian	OW	APD
C TRIBAL 13H-30-46	30	040S	060W	4301351321		Indian	Indian	OW	APD
C TRIBAL 13H-31-46	31	040S	060W	4301351326		Indian	Indian	OW	APD
_C TRIBAL 16-31D-46	31	040S	060W	4301351328		Indian	Indian	OW	APD
C TRIBAL 5H-26-47	26	040S	070W	4301351337		Indian	Indian	OW	APD
_C TRIBAL 5H-19-45	20	040S	050W	4301351349		Indian	Indian	OW	APD
C TRIBAL 16-36D-47	36	040S	070W	4301351363		Indian	Indian	OW	APD
15-4D-47 BTR	4	040S	070W	4301351377		Indian	Fee	OW	APD
16-23D-46 LC TRIBAL	23	040S	060W	4301351396		Indian	Fee	ow	APD
15-2D-36 BTR	2	030S	060W	4301351419		Indian	Fee	OW	APD
16-23D-37 BTR	23	030S	070W	4301351420	1	Indian	Fee	ow	APD
11-9D-47 BTR	9	040S	070W	4301351422		Indian	Fee	OW	APD
15-13D-47 BTR	13	040S	070W	4301351424		Indian	Indian	OW	APD
_C TRIBAL 15-19D-46	19	040S	060W	4301351426		Indian	Indian	OW	APD
16-13D-45 BTR	13	040S	050W	4301351428		Indian	Indian	OW	APD

14-12D-45 BTR	12	040S	050W	4301351444	Indian	Indian	OW	APD
16-14D-45 BTR	14	040S	050W	4301351445	Indian	Indian	OW	APD
5-13D-45 BTR	13	040S	050W	4301351446	Indian	Indian	OW	APD
LC TRIBAL 16-26D-46	26	040S	060W	4301351450	Indian	State	OW	APD
LC TRIBAL 10-20D-40	34	0408	060W	4301351451				
16-12D-45 BTR	12	040S	050W	4301351451	Indian Indian	State Indian	OW	APD
8-12D-45 BTR	12	040S	050W	4301351452			OW	APD
LC TRIBAL 1-35D-46	35	040S	060W		Indian	Indian	OW	APD
16-25D-37 BTR	<del></del>	0405	070W	4301351454	Indian	Fee	OW	APD
LC TRIBAL 13H-29-46	25			4301351455	Indian	Fee	OW	APD
	28	0408	060W	4301351462	Indian	Fee	OW	APD
LC TRIBAL 14-30D-37	30	0308	070W	4301351494	Indian	Fee	OW	APD
7-13D-45 BTR	13	0408	050W	4301351497	Indian	Indian	OW	APD
LC TRIBAL 4H-35-46	35	0408	060W	4301351515	Indian	Fee	OW	APD
LC TRIBAL 13H-19-46	19	040\$	060W	4301351543	Indian	Indian	OW	APD
16-26D-37 BTR	26	030S	070W	4301351598	Indian	Fee	OW	APD
LC TRIBAL 16-31D-37	31	030\$	070W	4301351610	Indian	Fee	OW	APD
5-4-35 BTR	4	030S	050W	4301351613	Indian	Fee	OW	APD
LC TRIBAL 16-31D-47	31	040S	070W	4301351616	Indian	Indian	OW	APD
LC TRIBAL 13H-31-47	31	040S	070W	4301351617	Indian	Indian	OW	APD
LC TRIBAL 13-32D-47	32	040S	070W	4301351619	Indian	Indian	OW	APD
LC TRIBAL 16H-32-47	32	040S	070W	4301351620	Indian	Indian	OW	APD
LC TRIBAL 1-32D-47	32	040S	070W	4301351624	Indian	Indian	OW	APD
LC TRIBAL 4H-32-47	32	040S	070W	4301351625	Indian	Indian	OW	APD
LC TRIBAL 13-28D-47	28	040S	070W	4301351627	Indian	Indian	OW	APD
LC TRIBAL 13H-29-47	28	040S	070W	4301351628	Indian	Indian	OW	APD
LC TRIBAL 16H-28-47	28	040S	070W	4301351629	Indian	Indian	OW	APD
LC TRIBAL 1-28D-47	28	040S	070W	4301351639	Indian	Indian	OW	APD
LC TRIBAL 1H-27-47	28	040S	070W	4301351640	Indian	Indian	OW	APD
LC TRIBAL 4H-28-47	28	040S	070W	4301351641	Indian	Indian	OW	APD
LC TRIBAL 7-25D-58	25	050S	W080	4301351643	Indian	Indian	OW	APD
LC TRIBAL 6-25D-58	25	050S	080W	4301351644	Indian	Indian	OW	APD
LC TRIBAL 13H-24-58	24	050S	W080	4301351645	Indian	Indian	OW	APD
LC TRIBAL 16-24D-58	24	050S	080W	4301351646	Indian	Indian	OW	APD
LC Tribal 8-23D-46	23	040S	060W	4301351654	Indian	Fee	OW	APD
LC Tribal 16-35D-45	35	040S	050W	4301351656	Indian	Fee	OW	APD
LC Tribal 13H-35-45	35	040S	050W	4301351657	Indian	Fee	ow	APD
LC Tribal 16-36D-45	36	040S	050W	4301351658	Indian	Fee	ow	APD
LC Tribal 13H-36-45	36	040S	050W	4301351659	Indian	Fee	OW	APD
LC Tribal 5-36D-45	36	0408	050W	4301351661	Indian	Fee	OW	APD
LC Tribal 8-26D-46	26	040\$	060W	4301351663	Indian	Fee	OW	APD
3-29D-36 BTR	29	0308	060W	4301351665	Indian	Fee	OW	APD

LC Tribal 5-35D-45	35	040S	050W	4301351666	Indian	Fee	OW	APD
_C Tribal 5-24D-46	24	0408	060W	4301351668	Indian	Indian	ow	APD
_C TRIBAL 6-12D-58	12	0508	080W	4301351696	Indian	Indian	OW	APD
LC TRIBAL 8-12D-58	12	050S	080W	4301351697	Indian	Indian	OW	APD
.C TRIBAL 16H-22-47	21	040S	070W	4301351700	Indian	Indian	OW	APD
5-25D-37 BTR	25	030S	070W	4301351803	Indian	Fee	OW	APD
8-3D-36 BTR	3	0308	060W	4301351804	Indian	Fee	OW	APD
14-26D-37 BTR	26	0308	070W	4301351805	Indian	Fee	OW	APD
9-4-35 BTR	4	0308	050W	4301351806	Indian	Fee	ow	APD
11-4D-35 BTR	4	030S	050W	4301351807	Indian	Fee	OW	APD
16-27D-37 BTR	27	0308	070W	4301351808	Indian	Fee	OW	APD
14-27D-37 BTR	27	0308	070W	4301351809	Indian	Fee	OW	APD
14-16D-46 BTR	16	040S	060W	4301351812	Indian	Indian	OW	APD
_C Tribal 16-35D-48	35	040S	080W	4301351847	Indian	Indian	OW	APD
LC Tribal 13H-35-48	35	040S	080W	4301351848	Indian	Indian	OW	APD
_C Tribal 13-2D-58	11	050S	080W	4301351850	Indian	Indian	OW	APD
5-13D-36 BTR	13	0308	060W	4301351862	Indian	Fee	OW	APD
5-8D-36 BTR	8	0308	060W	4301351871	Indian	Fee	OW	APD
16-1D-36 BTR	1	0308	060W	4301351872	Indian	Fee	ow	APD
3-18D-46 BTR	18	040S	060W	4301351897	Indian	Fee	OW	APD
_C Tribal 5-36D-46	36	0408	060W	4301351905	Indian	Indian	OW	APD
LC Tribal 5-26D-45	26	040S	050W	4301351907	Indian	Indian	OW	APD
14-13D-45 BTR	13	040S	050W	4301351974	Indian	Indian	OW	APD
14-34D-46 DLB	34	040S	060W	4301351975	Indian	Fee	OW	APD
LC Tribal 5-21D-45	21	0408	050W	4301352001	Indian	Indian	OW	APD
_C Tribal 8-22D-45	22	0408	050W	4301352002	Indian	Indian	OW	APD
_C Tribal 8-25D-45	25	0408	050W	4301352007	Indian	Indian	OW	APD
LC Tribal 16-25D-45	25	040S	050W	4301352008	Indian	Indian	OW	APD
LC Tribal 16-22D-45	22	040S	050W	4301352009	Indian	Indian	OW	APD
LC Tribal 16-26D-45	26	040S	050W	4301352010	Indian	Indian	OW	APD
LC Tribal 14-31D-37	31	0308	070W	4301352016	Indian	Fee	OW	APD
5-12D-45 BTR	12	040S	050W	4301352030	Indian	Indian	ow	APD
LC Tribal 9-20D-45	20	040S	050W	4301352031	Indian	Indian	OW	APD
LC Tribal 13-35D-47	35	0408	070W	4301352055	Indian	Indian	ow	APD
C Tribal 1-23D-47	23	040S	070W	4301352057	Indian	Indian	ow =	APD
9-17D-46 BTR	17	040S	060W	4301352059	Indian	Indian	OW	APD
11-18D-46 BTR	18	040S	060W	4301352060	Indian	Indian	OW	APD
9-10D-47 BTR	10	040S	070W	4301352092	Indian	Fee	OW	APD
LC Tribal 1-17D-47	17	0408	070W	4301352096	Indian	Fee	OW	APD
7-35D-37 BTR	35	0308	070W	4301352115	Indian	Fee	OW	APD
14-25D-37 BTR	25	0308	070W	4301352116	Indian	Fee	OW	APD

LC Tribal 5-25-46	25	040S	060W	4301352126	Indian	Indian	OW	APD
8-33D-35 BTR	33	030S	050W	4301352161	Indian	Fee	OW	APD
5-4D-36 BTR	4	030S	060W	4301352175	Indian	Fee	OW	APD
'-4D-36 BTR	4	030S	060W	4301352176	Indian	Fee	OW	APD
C Tribal 4-36D-47	36	040S	070W	4301352186	Indian	Indian	OW	APD
.C Tribal 4-22D-46	22	040S	060W	4301352944	Indian	Indian	OW	APD
.C Tribal 16-22D-46	22	040S	060W	4301352945	Indian	Indian	OW	APD
.C Tribal 11-19D-46	19	040S	060W	4301352946	Indian	Indian	OW	APD
.C Tribal 7-20D-45	20	040S	050W	4301352947	Indian	Indian	OW	APD
5-11D-35 BTR	11	030S	050W	4301353056	Indian	Fee	OW	APD
3-11D-35 BTR	11	030S	050W	4301353057	Indian	Fee	OW	APD
3TR 16-36D-37	36	030S	070W	4301353059	Indian	Fee	OW	APD
I-29D-35 BTR	30	030S	050W	4301353060	Indian	Fee	ow	APD
-30D-35 BTR	30	030S	050W	4301353061	Fee	Fee	OW	APD
C TRIBAL 3-23D-46	23	040S	060W	4301353066	Indian	State	ow	APD
C Tribal 14-23D-46	23	040S	060W	4301353067	Indian	State	OW	APD
.C Tribal 13-25D-46	25	040S	060W	4301353068	Indian	Indian	OW	APD
C Tribal 14-26D-46	26	040S	060W	4301353069	Indian	State	OW	APD
C Tribal 5-26D-46	26	040S	060W	4301353070	Indian	State	OW	APD
C Tribal 11-35D-45	35	040S	050W	4301353071	Indian	State	OW	APD
C Tribal 7-35D-45	35	040S	050W	4301353072	Indian	State	OW	APD
C Tribal 3-35D-45	35	040S	050W	4301353075	Indian	State	OW	APD
C Tribal 14-36D-45	36	040S	050W	4301353076	Indian	State	OW	APD
C Tribal 13-36D-45	36	040S	050W	4301353077	Indian	State	OW	APD
C Tribal 10-36D-45	36	040S	050W	4301353078	Indian	State	OW	APD
.C Tribal 8-36D-45	36	040S	050W	4301353079	Indian	State	OW	APD
.C Tribal 6-36D-45	36	040S	050W	4301353080	Indian	State	OW	APD
.C Tribal 1-34D-46	34	040S	060W	4301353081	Indian	State	OW	APD
.C Tribal 9-27D-46	27	040S	060W	4301353082	Indian	State	OW	APD
.C Tribal 13-35D-45	35	040S	050W	4301353083	Indian	State	OW	APD
C Tribal 8-35D-45	35	040S	050W	4301353084	Indian	State	OW	APD
.C Tribal 15-35D-45	35	040S	050W	4301353085	Indian	State	OW	APD
C Tribal 12-25D-45	25	040S	050W	4301353122	Indian	Indian	OW	APD
C Tribal 14-25D-45	25	040S	050W	4301353123	Indian	Indian	OW	APD
C Tribal 10-25D-45	25	040S	050W	4301353124	Indian	Indian	ow	APD
C Tribal 11-26-45	26	040S	050W	4301353125	Indian	Indian	OW	APD
C Tribal 13-26D-45	26	040S	050W	4301353126	Indian	Indian	OW	APD
C Tribal 7-31D-46	31	040S	060W	4301353127	Indian	Indian	OW	APD
.C Tribal 7-19D-45	19	040S	050W	4301353128	Indian	Indian	OW	APD
.C Tribal 5-19D-45	19	040S	050W	4301353130	Indian	Indian	OW	APD
.C Tribal 7-25D-46	25	040S	060W	4301353132	Indian	Indian	OW	APD

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_C Tribal 7-24D-46	24	0408	060W	4301353134		Indian	Indian	OW	APD
.C Tribal 14-31D-46	31	040S	060W	4301353135		Indian	Indian	OW	APD
C Tribal 14-30D-46	30	040S	060W	4301353136		Indian	Indian	OW	APD
13-4-35 BTR SWD	4	030S	050W	4301353293		Fee	Fee	OW	APD
.C FEE 14-26D-47	26	040S	070W	4301353294	1	Fee	Indian	OW	APD
C Fee 5-25D-47	25	040S	070W	4301353295		Fee	Indian	OW	APD
7-35-46 LC SWD	35	040S	060W	4301353296		Fee	Fee	OW	APD
.C Fee 1H-33-47	32	040S	070 <b>W</b>	4301353309		Fee	Indian	ow	APD
_C FEE 14-2D-58	2	050S	W080	4301353312		Fee	Indian	OW	APD
C FEE 13H-21-47	21	040S	070W	4301353313		Fee	Indian	OW	APD
C Fee 16-21D-47	21	040S	070W	4301353326		Fee	Indian	OW	APD
6-7D-46 BTR	7	040S	060W	4301353328		Fee	Indian	OW	APD
C Fee 15-26D-47	26	040S	070W	4301353331		Fee	Indian	OW	APD
.C Fee 4-24D-47	23	040S	070W	4301353332		Fee	Indian	OW	APD
.C Fee 5-34D-47	34	040S	070W	4301353333		Fee	Indian	OW	APD
.C Fee 5-35D-47	35	040S	070W	4301353334	:	Fee	Indian	OW	APD
3-34D-47 LC Fee	34	040S	070W	4301353337		Fee	Indian	OW	APD
4-35D-35 BTR	35	030S	050W	4301352120		Fee	Fee	OW	DRL
-17D-46 BTR	17	040S	060W	4301351078		Indian	Indian	OW	OPS
-34D-35 BTR	34	030S	050W	4301351187		Indian	Fee	OW	OPS
5-10D-45 BTR	10	040S	050W	4301351221		Indian	Indian	OW	OPS
-3D-45 BTR	3	040S	050W	4301351810		Indian	Indian	OW	OPS
-34D-35 BTR	34	030S	050W	4301352117		Fee	Fee	OW	OPS
-35D-35 BTR	35	030S	050W	4301352118		Fee	Fee	OW	OPS
-2D-46 BTR	2	040S	060W	4301353086		Indian	Fee	OW	OPS
'-21-46 DLB	21	040S	060W	4301333567	16526	Indian	Indian	OW	P
.C TRIBAL 1H-27-46	27	040S	060W	4301333568	18175	Indian	Fee	GW	P
'-29-46 DLB	29	040S	060W	4301333584	17603	Indian	Fee	GW	P
C TRIBAL 12H-28-46	28	0408	060W	4301333631	18132	Indian	Indian	GW	P
.C TRIBAL 13H-21-46	21	0408	060W	4301333632	18107	Indian	Indian	GW	 P
2-36-36 BTR	36	030S	060W	4301333638	16336	Indian	Fee	GW	P
i-5-46 BTR	5	0408	060W	4301333639	16542	Indian	Fee	OW	P
5-23-36 BTR	23	0308	060W	4301333642	16675	Indian	Fee	GW	P
4-29-36 BTR	29	0308	060W	4301333643	16725	Indian	Fee	ow	P
4-30-36 BTR	30	0308	060W	4301333644	16701	Indian	Fee	GW	<u>'</u>
'-20-46 DLB	20	040S	060W	4301333657	16584	Indian	Indian	OW	'P
.C TRIBAL 5-21D-46	21	0408	060W	4301333658	18887	Indian	Indian	OW	P
-20-46 DLB	20	0408	060W	4301333659	18750	Indian	Indian	GW	P
.C TRIBAL 13H-20-46	20	0408	060W	4301333678	17979	Indian	Indian	GW	P
14-7-46 BTR	7	0408	060W	4301333806	16890	Indian	Indian	GW	P
	1.	0.00	100011	TOO   OOOOOO	10000	HIMIAII	HIMIAH	UVV	1 1-1

1-5-45 BTR	5	040S	050W	4301333868	16931	Indian	Indian	OW	Р
5-16-36 BTR	16	030S	060W	4301333970	17195	Indian	Fee	ow	P
5-29-36 BTR	29	030S	060W	4301333972	17557	Indian	Fee	OW	P
4-30-36 BTR	30	030S	060W	4301333973	17249	Indian	Fee	OW	P
7-19-46 DLB	19	040S	060W	4301334004	19018	Indian	Indian	OW	Р
5-25-36 BTR	25	0308	060W	4301334021	17126	Fee	Fee	OW	P
5-4-45 BTR	4	0408	050W	4301334089	17507	Indian	Indian	oW	Р
13-2-46 BTR	2	040S	060W	4301334090	18618	Indian	Indian	ow	Р
2-3-45 BTR	3	040S	050W	4301334099	17932	Indian	Indian	OW	Р
7-6-45 BTR	6	040S	050W	4301334100	17653	Indian	Indian	OW	Р
1-9-45 BTR	9	0408	050W	4301334101	17910	Indian	Indian	OW	Р
8-10-45 BTR	10	040S	050W	4301334102	17530	Indian	Indian	ow	Р
7-17-45 BTR	17	040S	050W	4301334104	17933	Indian	Indian	OW	Р
16-7-45 BTR	7	040S	050W	4301334111	17665	Indian	Indian	OW	Р
15-18-45 BTR	18	040S	050W	4301334112	17832	Indian	Indian	ow	P
6-12-46 BTR	12	040S	060W	4301334114	17964	Indian	Indian	ow	P
5-13-46 BTR	13	040S	060W	4301334115	17833	Indian	Indian	OW	Р
16-26-36 BTR	26	030S	060W	4301334132	18028	Indian	Fee	ow	P
1-23-36 BTR	23	030S	060W	4301334136	17722	Indian	Fee	OW	Р
15-10-36 BTR	10	030S	060W	4301334277	17419	Indian	Fee	ow	Р
14-5-46 BTR	5	040S	060W	4301350307	17624	Fee	Fee	ow	Р
14X-22-46 DLB	22	040S	060W	4301350351	17604	Indian	Indian	ow	Р
16-13-36 BTR	13	030S	060W	4301350372	17853	Indian	Fee	ow	Р
5-33-46 DLB	33	040S	060W	4301350397	17765	Indian	Fee	OW	Р
5-34-46 DLB	34	040S	060W	4301350415	17801	Indian	State	GW	Р
LC FEE 12H-32-46	32	040S	060W	4301350431	18003	Fee	Fee	OW	Р
1-13D-47 BTR	13	040S	070W	4301350445	18205	Indian	Fee	OW	Р
16-8D-45 BTR	8	040S	050W	4301350466	18799	Indian	Indian	OW	Р
7-13D-46 BTR	13	040S	060W	4301350470	18076	Indian	Indian	OW	Р
14-8D-45 BTR	8	040S	050W	4301350567	18207	Indian	Indian	OW	Р
14-5D-45 BTR	5	040S	050W	4301350568	18108	Indian	Indian	OW	Р
16-31D-36 BTR	31	030S	060W	4301350573	18004	Indian	Fee	OW	P
5-7D-46 BTR	7	040S	060W	4301350574	18176	Indian	Indian	OW	Р
LC TRIBAL 13H-33-46	34	040S	060W	4301350575	18223	Indian	State	OW	Р
5-8-45 BTR	8	040S	050W	4301350607	18279	Indian	Indian	OW	Р
16-6D-45 BTR	6	040S	050W	4301350610	18177	Indian	Indian	OW	P
5-18D-45 BTR	18	040S	050W	4301350611	18300	Indian	Indian	OW	Р
7-26-37 BTR	26	030\$	070W	4301350641	18131	Indian	Fee	OW	Р
3-11D-36 BTR	11	030S	060W	4301350642	18299	Indian	Fee	OW	Р
16-1D-46 BTR	1	040S	060W	4301350675	18525	Indian	Indian	ow	Р
14-3-45 BTR	3	040S	050W	4301350676	18363	Indian	Indian	ow	Р

4-17D-45 BTR	17	040S	050W	4301350687	18517	Indian	Indian	OW	Р
5-6D-45 BTR	6	040S	050W	4301350688	18726	Indian	Indian	OW	P
7-7D-45 BTR	7	040S	050W	4301350689	18380	Indian	Indian	OW	P
14-10D-45 BTR	10	040S	050W	4301350754	18447	Indian	Indian	OW	P
14-9D-45 BTR	9	040S	050W	4301350755	18379	Indian	Indian	OW	P
13-16D-36 BTR	16	030S	060W	4301350757	18206	Indian	State	OW	Р
5-9D-36 BTR	9	030S	060W	4301350843	18381	Indian	Fee	OW	P
16-5D-46 BTR	5	040S	060W	4301350844	18280	Fee	Fee	OW	Р
5-27D-37 BTR	27	030S	070W	4301350847	18526	Indian	Fee	OW	Р
7-4D-45 BTR	4	040S	050W	4301350884	18562	Indian	Indian	OW	Р
2-16D-45 BTR	16	040S	050W	4301350899	18619	Indian	Indian	OW	Р
16-10D-45 BTR	10	040S	050W	4301350902	18725	Indian	Indian	OW	P
5-2D-36 BTR	2	030S	060W	4301350913	18886	Indian	Fee	ow	Р
13H-27-36 BTR	27	030S	060W	4301350918	18445	Indian	State	ow	Р
8-16D-46 BTR	16	040S	060W	4301350953	19027	Indian	Indian	OW	Р
16-16D-46 BTR	16	040S	060W	4301350956	19028	Indian	Indian	OW	Р
16-9D-45 BTR	9	040S	050W	4301350962	18662	Indian	Indian	OW	Р
14-31D-36 BTR	31	030S	060W	4301350973	18524	Indian	Fee	OW	Р
5-10D-36 BTR	10	030S	060W	4301350978	18989	Indian	Fee	OW	Р
1-32D-36 BTR	32	030S	060W	4301350979	18648	Indian	Fee	OW	Р
16-12D-36 BTR	12	030S	060W	4301350980	18748	Indian	Fee	ow	Р
2-18D-45 BTR	18	040S	050W	4301350991	18776	Indian	Indian	OW	Р
3-1-46 BTR	1	040S	060W	4301351017	18777	Indian	Fee	ow	Р
10-5-45 BTR	5	040S	050W	4301351062	18724	Indian	Indian	OW	Р
12-4D-45 BTR	4	040S	050W	4301351063	18813	Indian	Indian	ow	Р
1-10D-45 BTR	10	040S	050W	4301351064	18966	Indian	Indian	ow	Р
16-2D-46 BTR	2	040S	060W	4301351079	18830	Indian	Indian	OW	Р
9H-4-45 BTR	4	040S	050W	4301351092	18814	Indian	Indian	OW	Р
12-17-45 BTR	17	040S	050W	4301351097	18984	Indian	Indian	OW	Р
5-9D-46 BTR	9	040S	060W	4301351109	19313	Indian	Fee	OW	Р
14-9D-36 BTR	9	030S	060W	4301351144	19004	Indian	Fee	OW	Р
5-31D-36 BTR	31	030S	060W	4301351146	18691	Indian	Fee	OW	Р
4-9D-45 BTR	9	040S	050W	4301351157	18883	Indian	Indian	OW	Р
8-12D-46 BTR	12	040S	060W	4301351159	18911	Indian	Indian	OW	Р
LC TRIBAL 16-23D-47	23	040S	070W	4301351180	18617	Indian	Indian	OW	Р
14-7D-45 BTR	7	040S	050W	4301351222	18949	Indian	Indian	OW	Р
5-16D-45 BTR	16	040S	050W	4301351223	18987	Indian	Indian	OW	Р
4-5D-45 BTR	5	040S	050W	4301351242	18882	Indian	Indian	OW	P
LC TRIBAL 16H-19-45	19	0408	050W	4301351278	18627	Indian	Indian	OW	Р
LC TRIBAL 13-19D-45	19	040S	050W	4301351280	18628	Indian	Indian	OW	Р
LC TRIBAL 5-30D-45	30	040S	050W	4301351281	19448	Indian	Indian	OW	Р

LC TRIBAL 15-24D-46	24	040S	060W	4301351283	18626	Indian	Indian	OW	Р
LC TRIBAL 13H-24-46	19	040S	050W	4301351289	18629	Indian	Indian	ow	Р
7-16-47 BTR	16	040S	070W	4301351296	18950	Indian	Fee	ow	P
14-18D-45 BTR	18	040S	050W	4301351313	19005	Indian	Indian	ow	Р
LC TRIBAL 16-30D-46	30	040S	060W	4301351320	19006	Indian	Indian	ow	Р
LC TRIBAL 5-20D-45	20	040S	050W	4301351331	19449	Indian	Indian	ow	Р
11-8D-46 BTR	8	040S	060W	4301351336	19314	Indian	Indian	OW	Р
5-7D-45 BTR	7	040S	050W	4301351350	18951	Indian	Indian	ow	Р
7-5-35 BTR	5	030S	050W	4301351599	19078	Indian	Fee	OW	P
13-5D-35 BTR	5	030S	050W	4301351600	18996	Indian	Fee	ow	Р
11-5D-35 BTR	5	030S	050W	4301351601	19061	Fee	Fee	OW	Р
15-5D-35 BTR	5	030S	050W	4301351602	19062	Fee	Fee	OW	Р
9-5D-35 BTR	5	030S	050W	4301351609	19029	Indian	Fee	ow	Р
3-5D-35 BTR	5	030S	050W	4301351638	19079	Indian	Fee	OW	Р
7-8-46 BTR	8	040S	060W	4301351702	19315	Indian	Indian	ow	Р
7-30-46 DLB	30	040S	060W	4301351703	18997	Fee	Indian	OW	Р
3-13D-46 BTR	13	040S	060W	4301351718	18881	Indian	Indian	ow	Р
2-13D-46 BTR	13	040S	060W	4301351719	18885	Indian	Indian	OW	Р
12-12D-46 BTR	12	040S	060W	4301351720	18867	Indian	Indian	OW	P
10-12D-46 BTR	12	040S	060W	4301351721	18856	Indian	Indian	ow	Р
11-11D-47 BTR	11	040S	070W	4301352091	19633	Fee	Fee	ow	P
7-12D-47 BTR	12	040S	070W	4301352094	19600	Indian	Fee	ow	Р
5-12D-47 BTR	12	040S	070W	4301352095	19634	Indian	Fee	ow	Р
14-33D-35 BTR	33	030S	050W	4301352162	19450	Indian	Fee	ow	Р
16-33D-35 BTR	33	030S	050W	4301352163	19451	Indian	Fee	ow	Р
14-22-46 DLB	22	040S	060W	4301333660	17604	Indian	Indian	D	PA
13H-31-36 BTR	31	0308	060W	4301350465	18485	Indian	Fee	OW	PA
16X-23D-36 BTR	23	030S	060W	4301350623	18007	Indian	State	OW	PA
8-6-45 BTR	6	040S	050W	4301350900	18561	Indian	Indian	ow	PA
13-13-36 BTR	13	030S	060W	4301350919	18364	Indian	Fee	OW	PA
7-28-46 DLB	28	040S	060W	4301333569	16460	Indian	Indian	OW	S
5-21-36 BTR	21	030S	060W	4301333641	16674	Indian	Fee	GW	S
13-26-36 BTR	26	030S	060W	4301333980	17569	Indian	Fee	OW	S
14-1-46 BTR	1	040S	060W	4301334113	18516	Indian	Indian	OW	S
16-21-36 BTR	21	030S	060W	4301334130	17721	Indian	Fee	OW	S
14-21-36 BTR	21	030S	060W	4301334131	18006	Indian	Fee	OW	S
7-16-36 BTR	16	030\$	060W	4301334133	17834	Indian	Fee	OW	s
1-30-36 BTR	30	0308	060W	4301334134	17905	Indian	Fee	OW	S
16-30-36 BTR	30	0308	060W	4301334135	18005	Indian	Fee	OW	S
3-23-36 BTR	23	0308	060W	4301334137	17860	Indian	Fee	OW	S
16-16-36 BTR	16	030S	060W	4301334138	17666	Indian	Fee	OW	S

4-26-36 BTR	26	030S	060W	4301334139	17620	Fee	Fee	OW	S
9-11-36 BTR	11	030S	060W	4301334276	17451	Indian	Fee	OW	S
3-36-36 BTR	36	030S	060W	4301350398	17955	Indian	Fee	OW	S
7-10-36 BTR	10	030S	060W	4301350437	18052	Indian	Fee	OW	S
16-12D-46 BTR	12	040S	060W	4301350467	18051	Indian	Indian	OW	S
13H-13-46 BTR	13	040\$	060W	4301350468	18208	Indian	Indian	OW	S
13-12-46 BTR	12	040S	060W	4301350469	18233	Indian	Indian	OW	S
14-8D-36 BTR	8	030S	060W	4301350612	18163	Indian	Fee	OW	S
14-7D-36 BTR	7	030S	060W	4301350613	18330	Indian	Fee	OW	S
16-9-36 BTR	9	0308	060W	4301350645	18078	Indian	Fee	OW	S
7-27-37 BTR	27	030S	070W	4301350647	18090	Indian	Fee	OW	S
16-12D-37 BTR	12	030S	070W	4301350785	18446	Indian	Fee	OW	S
14-21D-37 BTR	21	030S	070W	4301350859	18548	Indian	Fee	OW	S
10-18D-36 BTR	18	030S	060W	4301350915	18884	Indian	Fee	OW	S
5-27D <b>-</b> 36	27	030S	060W	4301350917	18482	Indian	State	OW	S
10-36D-36 BTR	36	030S	060W	4301351005	18523	Indian	Fee	OW	S
14-6D-45 BTR	6	040S	050W	4301351158	18967	Indian	Indian	OW	S
5H-1-46 BTR UTELAND BUTTE	6	040S	050W	4301351215	18728	Indian	Indian	OW	S
5H-1-46 BTR WASATCH	6	040S	050W	4301351216	18727	Indian	Indian	OW	S
1-25D-36 BTR	25	030S	060W	4301351294	18798	Indian	Fee	OW	S
5-5D-35 BTR	5	030S	050W	4301351605	19055	Indian	Fee	OW	S
16-23-36 BTR	23	030S	060W	4301333971	17182	Indian	Fee	OW	TA
LC TRIBAL 14-23D-47	23	040S	070W	4301334022	18616	Indian	Indian	OW	TA
5-32D-36 BTR	32	030S	060W	4301350756	18328	Indian	Fee	OW	TA



October 20, 2016

RECEIVED

OCT 21 2016

Re: Bill Barrett Corporation Transfer to New Operator

DIV. OF OIL, GAS & MINING

Dear Ms. Medina:

Attached please find the change of operation Form 9, Form 5's and Request to Transfer APD formchanging the operator from Bill Barrett Corporation to RIG II, LLC, effective 11/1/2016. Badlands Energy – Utah, LLC will be a sub-operator.

#### **New Operator Contact information:**

RIG II, LLC 1582 West 2600 South Woods Cross, Utah 84087-0298 Telephone:(801) 683-4245 Fax:(801) 298-9889

Upon reviewing the attached, please contact myself with any questions at 303-312-8115.

Sincerely,

**Bill Barrett Corporation** 

Brady Riley Permit Analyst

#### STATE OF UTAH FORM 9 **DEPARTMENT OF NATURAL RESOURCES** 5. LEASE DESIGNATION AND SERIAL NUMBER: DIVISION OF OIL, GAS AND MINING (see attached well list) 6. IF INDIAN, ALLOTTEE OR TRIBE NAME: SUNDRY NOTICES AND REPORTS ON WELLS N/A 7, UNIT or CA AGREEMENT NAME: Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals. 1. TYPE OF WELL 8. WELL NAME and NUMBER OIL WELL 🔽 GAS WELL (see attached well list) 2. NAME OF OPERATOR: 9. API NUMBER RIG II, LLC 3. ADDRESS OF OPERATOR PHONE NUMBER: 10. FIELD AND POOL, OR WILDCAT: 1582 West 2600 South (801) 683-4245 STATE UT ZIP 84087 Wood Cross 4. LOCATION OF WELL FOOTAGES AT SURFACE: (see attached well list) COUNTY: QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: STATE: UTAH CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA 11. TYPE OF SUBMISSION TYPE OF ACTION ACIDIZE REPERFORATE CURRENT FORMATION NOTICE OF INTENT (Submit in Duplicate) ALTER CASING FRACTURE TREAT SIDETRACK TO REPAIR WELL Approximate date work will start; CASING REPAIR **NEW CONSTRUCTION** TEMPORARILY ABANDON 11/1/2016 CHANGE TO PREVIOUS PLANS OPERATOR CHANGE TUBING REPAIR CHANGE TUBING PLUG AND ABANDON VENT OR FLARE SUBSEQUENT REPORT CHANGE WELL NAME PLUG BACK WATER DISPOSÁL (Submit Original Form Only) CHANGE WELL STATUS PRODUCTION (START/RESUME) WATER SHUT-OFF Date of work completion: COMMINGLE PRODUCING FORMATIONS RECLAMATION OF WELL SITE OTHER: CONVERT WELL TYPE **RECOMPLETE - DIFFERENT FORMATION** 12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. RIG II, LLC IS SUBMITTING THIS SUNDRY AS NOTIFICATION THAT THE WELLS LISTED ON THE ATTACHED LIST HAVE BEEN SOLD TO-Rig II, LLC BY BILL BILL BARRETT CORPORATION EFFECTIVE 11/1/2016. PLEASE REFER ALL FUTURE CORRESPONDENCE TO THE ADDRESS BELOW. RIG II, LLC 1582 West 2600 South Woods Cross, Utah 84087-0298 801-683-4245 (STATE/FEE BOND # 9219529/ BLM BOND # UTB000712/ BIA BOND # LPM9224670) BILL BARRETT CORPORATION NOILS RIG II, LLC MAME (PLEASE PRINT) \_ NAME (PLEASE PRINT) SIGNATURE SIGNATURE EH&S, Government and Regulatory Affairs Jesse McSwain Manager NAME (PLEASE PRINT) 1012016

**APPROVED** 

NOV 0 7 2016

(This space for State use only)

# STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

### **Request to Transfer Application or Permit to Drill**

	(This form should ac	ccompany a Sundr	y Notice, Form 9, reque	esting APD transfer)		
Well	name:	(See attached li	st)			
API ı	number:					
Loca	ation:	Qtr-Qtr:	Section:	Township: Range:		
Com	pany that filed original application:	Bill Barrett Corp	oration			
Date	original permit was issued:					
Com	pany that permit was issued to:	Bill Barrett Cor	poration			
Check one		Des	ired Action:			
	Transfer pending (unapproved) App					
	The undersigned as owner with legal r submitted in the pending Application for owner of the application accepts and a	or Permit to Dril	l, remains valid ar	nd does not require revision. The	new	
✓	Transfer approved Application for F	ermit to Drill t	o new operator			
	The undersigned as owner with legal r information as submitted in the previous revision.				re	
Folio	owing is a checklist of some items rel	ated to the ap	plication, which s	should be verified.	Yes	No
If loc	ated on private land, has the ownership	changed?			<b>√</b>	
	if so, has the surface agreement been	updated?				✓
	e any wells been drilled in the vicinity of tirements for this location?	the proposed w	rell which would af	fect the spacing or siting		✓
	e there been any unit or other agreemen osed well?	ts put in place t	hat could affect th	e permitting or operation of this		✓
	there been any changes to the access osed location?	route including	ownership or righ	t-of-way, which could affect the		✓
Has t	the approved source of water for drilling	changed?				✓
	e there been any physical changes to the s from what was discussed at the onsite		on or access route	which will require a change in		✓
Is bo	nding still in place, which covers this pro	posed well? B	ond No. 9219529-UDOGM/U	JTB000712-BLM / LPM9224670-BIA	1	
shou nece	desired or necessary changes to either a ld be filed on a Sundry Notice, Form 9, o ssary supporting information as required	or amended Ap	plication for Permi			red,
	e (please print) Jesse McSwain		Title Manager	2110		
_	esenting (company name) RIG II, LLC		Date 10 0	<u> 114 </u>		
rtepi	cooming (company name)			· · · · · · · · · · · · · · · · · · ·		

The person signing this form must have legal authority to represent the company or individual(s) to be listed as the new operator on the Application for Permit to Drill.

## **STATE OF UTAH**DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL, GAS AND MINING

•	TRANSFER OF AUTHORITY TO INJECT								
Well Name and Number 6-32-36 BTR SWD		4			API Number 4301350921				
Location of Well				DUQUENOE	Field or Unit Name CEDAR RIM				
Footage: 1628 FNL 1553 FWL  QQ, Section, Township, Range: SENW	32	3S	6W	County : DUCHENSE  State : UTAH	Lease Designation and Number 2OG0005608				

EFFECTIVE DATE OF TRANSFER: 11/1/2016

CURRENT OP	PERATOR	
Company:	BILL BARRETT CORPORATION	Name: Duane Zavadil
Address:	1099 18th Street Ste 2300	Signature: 2nCd
	city DENVER state CO zip 80202	Senior Vice President - Title: EH&S, Government and Regulatory Affairs
Phone:	(303) 293-9100	Date: 10 20 16
Comments	· · · · · · · · · · · · · · · · · · ·	

Address: 1582 West 2600 South Signature: Signature: Manager	Company: RIG II, LLC Name: Jesse McSwain	
10/2 . 111	1593 West 2000 Courts	R:
(004) 002 4045	city Wood Cross state UT zip 84087 Title: Manager	
Phone: (801) 683-4245 Date: 10 LC 10	Phone: (801) 683-4245 Date: 10 20 10	

(This space for State use only)

Transfer approved by:

Approval Date: ///3//L

Comments:

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

	TRANSFER OF AL	JTHORITY TO INJECT	T
Well Name and 16-6D-46 BT			API Number 4301350781
ocation of Well		:	Field or Unit Name
Footage: 03	200 FSL 0099 FEL	County : DUCHESNE	ALTAMONT Lease Designation and Number
QQ, Section,	Township, Range: SESE 6 4S 6W	State: UTAH	20G0005608
	11/1/2016		
EFFECTIVE L	DATE OF TRANSFER: 11/1/2016		
URRENT OP	PERATOR		
Company:	BILL BARRETT CORPORATION	Name: Duane	Zavadil
Address:	1099 18th Street Ste 2300	Signature:	m ZwW
	city DENVER state CO zip 80202	SeniorV	ice President - Government and Regulatory Affairs
Phone:	(303) 293-9100	Date:	20/14
Comments:	:	<del>-                                    </del>	
NEW OPERAT			
Company:	RIG II, LLC	Name: Jesse	McSwain
Address:	1582 West 2600 South	Signature:	Dese MG:
	city Wood Cross state UT zip 84087	Title: Mana	
Phone:	(801) 683-4245	Date:	120/14
Comments	:		
This space for S	state use only	•	1 ,
Transfer ap	pproved by:	Approval Date:	11/3/16
	Title: VIC		

Comments:

#### STATE OF UTAH

DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

	TRANSFER OF AL	JTHORITY TO INJEC	Γ
ell Name and SWD 9-36 B	TR		API Number 4301350646
cation of Well			Field or Unit Name CEDAR RIM
Footage: 0539 FSL 0704 FEL		County : DUCHESNE	Lease Designation and Number
QQ, Section, Township, Range: SESE 9 3S 6W		State: UTAH	2OG0005608
FFECTIVE	DATE OF TRANSFER: 11/1/2016		
URRENT OP	PERATOR		
	DV L DADDETT CODDODATION	_	
Company:	BILL BARRETT CORPORATION	Name: Duane	e Zavadil
Address:	1099 18th Street Ste 2300	Signature: Senior V	rice President -
	city DENVER state CO zip 80202	Title: EH&S, G	Government and Regulatory Affairs
Phone:	(303) 293-9100	Date: <u>\</u>	2014
Comments:			
EW OPERAT	FOR		
Company:	RIG II, LLC	Name: Jesse	McSwain
Address:	1582 West 2600 South	Signature:	ENE MEG-
	city Wood Cross state UT zip 84087	Title: Mana	ger
Phone:	(801) 683-4245	Date:	20/16
Comments:			
is space for S	tate use only)		
Transfer approved by:		Approval Date:	
	Title:		
	This well was own	rived by USE.	PH.
Comr	ments:  This well was approved with	Il be required.	
	EPH approved to.		